



County Borough



of Blackpool.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH

FOR THE YEAR 1911,

BY

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M.D., D.P.H.

*Medical Officer of Health, School Medical Officer, and
Medical Superintendent to the Infectious Diseases Hospital.*

Blackpool :

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— 1912 —

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1911-12.

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*To the Mayor and Council of the County Borough
of Blackpool.*

GENTLEMEN,—

I herewith submit the Health Report for the year 1911, this being the fourth which I have prepared.

As in previous years the Report is divided into four portions :—
(1) Vital Statistics, (2) Infectious Disease, (3) General Sanitary Work, and (4) Meteorology.

The birth rate continues to fall. The figure for 1911 was only 41.2 per cent. of that for 1878.

The death-rate was comparatively high, viz. :—14.5 per 1,000. The high rate was entirely attributable to the hot dry summer, causing an excessive mortality amongst infants.

The infant mortality rate was 126 per 1,000 births. We now consider this a high rate, but it is some indication of the progress made during recent years to observe that the average up to the year 1900 was considerably above this figure.

With regard to Infectious Disease, Measles was prevalent, but the incidence of Scarlet Fever, Diphtheria, and Enteric Fever was low.

It is with much satisfaction I draw your attention to the regulations of the Local Government Board making Consumption a compulsorily notifiable disease. This is the first decisive step towards eradicating the disease. The powers of dealing with it are considerably augmented by certain provisions of the National Insurance Act.

With regard to general Sanitary Work, no efforts have been spared by the Chief and Assistant Inspectors in carrying out all the requirements of the various Public Health Acts.

Part III. of this Report deserves your careful consideration. The scope of the work of the Health Department is extending year by year, and this extension is assuming more of the nature of personal and individual hygiene than has prevailed in the past. While general sanitary work has undoubtedly had a very marked influence in improving our statistics, we are now carrying on our sanitary campaign at closer quarters, and in this connection I have only to remind you of our dealings with the ravages of Consumption and with Infant mortality.

Mr. Berry and the clerical staff have rendered me much assistance during the year.

I have the honour to be, Gentlemen,

Your faithful servant,

E. W. REES JONES.

June, 1912.

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PRELIMINARY.

A circular from the Local Government Board, dated November, 1911, deals with the subject of the Annual Health Reports. It states that these reports being for the information of the Board and County Council as well as the local Council, there should be in each report a Detailed statement of all local circumstances, and while these details may seem superfluous for the latter they may often be needed by the former bodies. This circular specifies the following subjects upon which, amongst others, remarks should be made :—Physical features, chief occupations, house accommodation, water supply (with special comments on plumbo-solvency), milk supply, food supply, sewerage and drainage, scavenging, disposal of sewage, nuisances, bye-laws, sanitary conditions of schools, infectious disease, the control of tuberculosis, infant mortality, medical inspection of school children, vital statistics, etc.

AREA.

The Municipal Borough of Blackpool comprises the township of Layton-with-Warbreck, part of the township of Marton, and that part of the township of Bispham-with-Norbreck known as Bispham Hawes. The following is the area of the Wards exclusive of the foreshore :—Claremont 707 acres, Talbot 447 acres, Bank Hey 55½ acres, Brunswick 577½ acres, Foxhall 731 acres, and Waterloo 1,004 acres.

DENSITY OF POPULATION.

The mean density of population for the whole Borough is equal to 17.33 persons per acre :—In Claremont Ward it is 15.68; Talbot Ward, 27.35; Bank Hey Ward, 30.66; Brunswick Ward, 16.59; Foxhall Ward, 25.02; and Waterloo Ward, 8.13.

ELEVATION.

The mean elevation of the Borough is about 28½ feet above sea level, and varies between about 97 feet at Warbreck Hill, and about 9½ feet in the field north of Bloomfield Road (West).

Blackpool presents the curious condition that the main direction of the natural drainage is away from the sea. Commencing at the north end, there is a depression near the Gynn Inn, not extending far inland, and then the land rises to the top of Warbreek Hill, with a short slope towards the sea, and a longer slope inland. There is a long slope also in a southerly direction to about the Manchester Hotel, where the main sewer outfall is situated. South of this, to the boundary between Blackpool and St. Annes, the surface is very flat, and averages only about 20 feet above sea level. The main natural drainage of the northern part of the Borough is by means of a watercourse, known as the Layton Dyke (for part of its course the boundary between Blackpool and Hardhorn), into Marton Mere, and thence into the Wyre, and thus into the sea at Fleetwood.

GEOLOGY.

The town may be roughly divided into two portions ; the first being that north of the Central Station, and having a subsoil of glacial boulder elays, the two beds being separated by sands and shingle, together at Norbreek reaching more than 100 feet in thickness, and resting on an ancient plane of marine denudation cut in the new red marls which, east of Fleetwood are salt bearing, the rock salt being thicker than any in Cheshire. The second, which lies south of the Central Station, consists of peat, lying on the glacial drift. This bed of peat is of varying thickness of 10, 20, or even 30 feet, being overlain with a greater or less thickness of blown sand. North of Blackpool it reappears at Rossall, and is associated with a submerged forest.

The boulder clay subsoil extends beneath Claremont, Talbot, Bank Hey, and a portion of Brunswiek Ward, and also the easterly portion of Foxhall Ward. The portion of Brunswick Ward from the Central Station to Princeess Street, and to a short distance east of the coast railway line, has a peaty subsoil, which, in this locality, comes nearly to the surface, and is of variable depth, rendering the ground very treacherous in places. The remainder of Foxhall and Waterloo Wards has a good depth of blown sand overlying the peat, except in isolated places. In parts of this portion of the Borough the sand is very fine, and in the ground it has almost the consistency of mortar.

SEWERAGE.

The District is drained as follows:—

(i) By the chief system of sewers which drains by gravitation the Borough except those portions mentioned below. This empties into a large sewer chamber, under Rigby Road and Tyldesley Road, which is egg-shaped, being thirteen feet in vertical diameter, and nine feet across at its widest part.

The Lytham Road Sewer, which is, for about one-third of its length at the lower end a 3 ft. by 2 ft. 6 in. brick culvert, and at its upper end a pipe sewer varying from 15 in. to 12 in., enters this chamber from the south, and the Bonny Street culvert enters it from the north, as well as the old culvert beneath the Promenade, whilst the inland main sewer empties into it from the east.

(ii) A small sewerage system which carries the sewerage from Little Layton by gravitation into a tank situated in a field east of the Cemetery, whence it is pumped daily into the terminus of the inland main sewer in Layton Lane, down which it flows by gravitation.

(iii) The drainage from the district east of the portion of Lytham Road south of the South Shore Station, and east of the railway line south of the Destructor, extending inland to Middle Lane and Central Drive, flows by gravitation to a tank at the Destructor, whence it is pumped into a new sewer chamber under the extension of Rigby Road, connected to the old one, whence sewage can flow by gravitation to the sea.

(iv) The district east of Middle Lane and south of Waterloo Road is drained by gravitation to a pumping station at the corner of Waterloo Road and Bloomfield Road, whence it is pumped into the tank at the Destructor mentioned under (iii).

Iron and steel outfall pipes, each three feet in diameter, are laid down seawards for a distance of 950 lineal yards from high-water mark, the sewage after being screened through electrically operated fine screens, by which all the gross solids are removed from the

sewage, is discharged through the northerly pipe, and the Spen Dyke surface water being discharged through the southerly one. Valves fixed in a pen-stock chamber, beneath the Promenade, serve to keep all sea water from the sewage chambers and sewers whilst the outfall is tide-locked. Sewage is discharged immediately the level of the sea is below the level of the sewage in the storage chamber, until $1\frac{1}{2}$ hours before time of low water, when the valves are again closed. Both the Sewer outfall and the Spen Dyke surface water outfall terminate seaward, at a depth of about five feet below the lowest level of low water of a high spring tide.

During the re-construction of the pen-stock chamber necessitated by the widening of the Promenade, storm overflow pipes were provided to relieve the sewage chambers during heavy rains with an incoming tide, and also a pumping chamber, if required, for use when the sewerage system is full at high tide.

(v) A smaller system takes the sewage from a portion of Claremont Park, and from an estate in Claremont Ward, which contains Cheltenham, Chesterfield, Clifford, Carshalton, and Handsworth Reads, etc., and also from a portion of the Gynn Estate, outside the Borough in the district of Bispham. This sewage flows by gravitation to an outfall at the Gynn, which extends seawards to a distance of 440 yards, sewage discharging at all states of the tide. This outfall is now being extended 200 yards further seawards, and similar screening arrangements to those adopted at the outfall opposite Rigby Road are also being installed at the Gynn outfall.

SEWER VENTILATION.

There is no complete system of Sewer Ventilation in the Borough, but I am informed by the Borough Surveyor that good progress has been made with a system of ventilating the sewers by means of tall columns 30 to 40 feet in height, placed at intervals of about 200 yards, and in such positions as not to be a nuisance or injurious to the inhabitants of adjacent houses. Practically all the surface ventilators have been closed,

COLLECTION OF EXCRETA AND HOUSEHOLD REFUSE.

Blackpool is almost entirely a water carriage town. There are no cesspools or pail closets or privies in any of the inhabited parts, but on the outskirts there are a few of these. On the extension of the sewerage system they are being gradually abolished. The cesspools and privies are emptied and cleaned at least once a week in all parts of the Borough where they exist.

With regard to household refuse, galvanised iron bins with tight-fitting covers are the most satisfactory of all forms of receptacles, and these are the forms which are being encouraged by my department. I am informed by the Cleansing Superintendent that during the season a daily collection was carried out at the Hotels, Hydros, Restaurants, and the larger Boarding Houses, whilst from the ordinary Company-houses, the refuse is removed from two to three times a week. With a slight modification requisite for meeting the reduced demand in connection with company-houses, this system is maintained during the winter months. The refuse collected is dealt with at the Destructor, and during the year 18,581 tons were destroyed.

WATER SUPPLY.

This is under the jurisdiction of the Fylde Water Board, a body composed of representatives from Blackpool, Lytham, St. Annes, and Fleetwood. The water is now laid on to every inhabited part of the Borough, and is an upland surface water derived from the Bleasdale and Grizedale Fells. The gathering ground is a good one, but the water derived from it is soft and of a peaty nature, and occasionally contains a certain amount of sediment, detracting from its appearance. This is particularly likely to occur in streets where the branch pipes supply come to a dead end, and occasional complaints are received (from occupiers of houses in such streets) of the sediment in the water.

As is well known, soft upland surface water of this nature, especially if containing peaty matter, is liable to act on lead pipes and thus cause contamination of the water by lead, and this is apt to occur to a

slight extent with the Fylde water. There is absolutely no danger to health likely to arise from this cause, provided occupiers of houses would take the precaution of making sure that the first water drawn off in the morning is not used for drinking or culinary purposes. It is only the water which has been standing all night in contact with the lead house service pipes which is likely to be contaminated.

The Superintendent of the Fylde Water Board informs me that no cases of lead poisoning owing to the drinking water have ever come to the knowledge of the Board, although in many cases, such as isolated farms, the lead service pipes are of considerable length.

During 1903, the Fylde Water Board commenced to make an immense new reservoir on their property, near the gathering grounds, which will largely increase the reserve stock of water available during any prolonged drought, and which should render the Fylde District secure from any chance of water famine for many years to come. This reservoir is estimated to cost £137,727, and to contain when completed 332 million gallons.

County Borough of Blackpool.



STATISTICAL SUMMARY, 1911.

SITUATION : Latitude, 53° 49' N. ; Longitude, 3° 3' W.

Area of Borough (exclusive of foreshore)	3,522 acres
Area of foreshore	721 acres
Population (Census, 1st April, 1911)	58,376 persons
Persons per House as per Census (Approximate)	4.5

	1910.	1911.
Rateable Value (General District Rate)	£508,255	£523,105
Do. (Borough Rate)	£518,787	£533,619
Number of Dwelling Houses on Rate Book ...	13,568	14,012
Do. do. do. empty	207	298
Population of Residents estimated at middle of year from number of inhabited houses	60,113	61,052
Density of Population (persons per acre)	17.20	17.33
Number of Births	1,006	975
Birth Rate (per 1,000 inhabitants)	16.74	15.97
Number of Deaths of Residents	686	811
Death Rate	11.41	13.28
Death Rate (corrected for age and sex distribution; factor for 1901 Census 1.093)	12.47	14.51
Number of Deaths of Children under one year of age	105	123
Infantile Mortality	104.37	126.15

REPORT.

PART I.—VITAL STATISTICS.

POPULATION.

I have estimated the population at the middle of 1911 as 61,052. I had hoped to be able in this Report to supply full information of the results of the census of last year. Such information, however, is not yet to hand.

I am indebted to the Borough Treasurer for supplying me with information as to the number of inhabited and uninhabited houses in each of the Wards during the Autumn enumeration, lasting from the 13th to the 22nd of November, 1911. The figures are as follows:—

WARD.	NUMBER OF HOUSES.		
	Empty	Inhabited	Total
Claremont.....	33	2,518	2,551
Talbot	39	2,703	2,742
Bank Hey.....	7	379	386
Brunswick	51	2,147	2,198
Foxhall	83	4,144	4,227
Waterloo	85	1,823	1,908
Totals	298	13,714	14,012

It will be of interest to compare the total number of houses for the year with the corresponding numbers for previous years :—

NUMBER OF HOUSES.

	Empty	Inhabited	Total
1911	298	13,714	14,012
1910	207	13,361	13,568
1909	200	12,994	13,194
1908	171	12,607	12,778
1907	153	12,334	12,487
1906	191	12,053	12,244
1905	188	11,789	11,977
1904	272	11,494	11,766
1903	309	11,181	11,490

It will be observed that the increase in the total number of houses is 444. Of these, 353 were inhabited, while 91 were uninhabited.

The ward populations, calculated on a reduced factor or ratio of persons per house, are as follows :—

Claremont ...	11,084
Talbot.....	12,227
Bank Hey	1,702
Brunswick	9,585
Foxhall	18,290
Waterloo.....	8,164
<hr/>	
Total.....	<u>61,052</u>

BIRTHS.

During the year 975 births were registered, including 22 in the Kirkham Workhouse. These, divided into males and females for the four quarters of the year, are as follows :

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
Males ...	118	125	123	110	476
Females .	109	141	132	117	499
Total ...	227	266	255	227	975

The birth-rate for the year on the gross population was 15.97 per 1,000. This is only 41 per cent. of the birth-rate for 1878, and the table on page 20, and the chart facing page 20, will reveal vividly the steady and almost continuous decline which is taking place in the rate.

This rate compares with the other divisions of the country as follows :—

England and Wales	24.4	per 1,000
77 Great Towns.....	25.6	„
136 Smaller Towns	23.4	„
Rural England and Wales	23.4	„
Blackpool	15.97	„

In comparison with other portions of the country, the birth-rate in Blackpool has always been low. This is due

entirely to the lower proportion in the population of married women of child-bearing age. The complete census returns, when issued, will prove this.

In discussing the subject of the birth-rate, I feel I cannot do more than repeat my observations of last year. The birth-rate is falling. The 1911 figure is the lowest yet recorded in the history of the town. Fewer children are being born, and almost as a logical sequence it follows that we must more and more protect the living, and increase the chances of viability. This can only be done by throwing into our sanitary work enthusiasm and eagerness, and availing ourselves of all the results of our own and other people's experience and the findings of scientific investigation. What exactly are the methods employed by us can be appreciated by reading through this report, where mention is made of all the varying activities of the Health Department.

The matter of infant rearing has received much attention by us, and I trust, with your authority, efforts to cope with Infant Mortality will increase in their strenuousness.

The earliest recorded birth-rate which I have of Blackpool is for the year 1878, when, with a population of 13,000, there was a rate of 38.8. I have prepared a table based on the same lines as a table in the Annual Report of the Registrar-General for the year 1907. The rate for 1878 is taken as a standard and is called 100, and the subsequent years are given as percentages compared with this year, 1878 :—

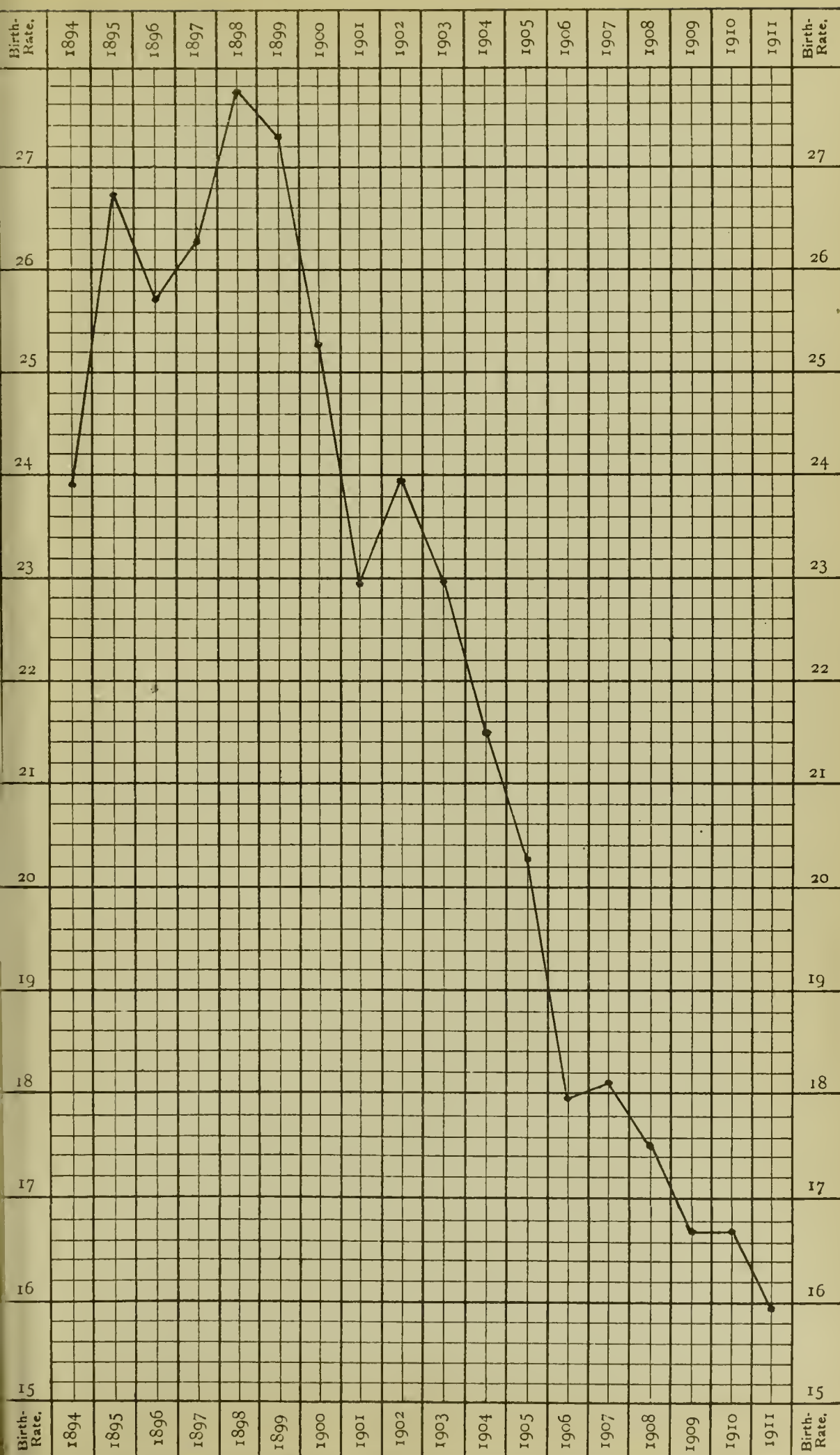
Period.	Birth rate Blackpool.	Birth rate Blackpool compared with rate for 1878 taken as 100	Birth rate England and Wales.	Birth rate England and Wales. compared with rate for 1878, taken as 100
1878	38.8	100	35.6	100
1879	36.6	94.3	34.7	97.5
1880	34.0	87.6	34.2	96.1
1881	30.6	78.9	33.9	95.2
1882	30.0	77.3	33.8	94.9
1883	30.0	77.3	33.5	94.1
1884	29.8	76.8	33.6	94.3
1885	27.4	70.6	32.9	92.4
1886	25.9	66.8	32.8	92.1
1887	25.3	65.2	31.9	89.6
1888	24.5	63.1	31.2	87.6
1889	26.5	68.3	31.1	87.4
1890	23.7	61.1	30.2	84.8
1891	22.3	57.5	31.4	88.2
1892	24.0	61.9	30.4	85.4
1893	22.4	57.7	30.7	86.2
1894	23.9	61.6	29.6	83.1
1895	26.7	68.8	30.3	85.1
1896	25.7	66.2	29.6	83.1
1897	26.25	67.7	29.6	83.1
1898	27.74	71.5	29.3	82.3
1899	27.34	70.5	29.1	81.7
1900	25.27	65.1	28.7	80.6
1901	22.90	59.0	28.5	80.1
1902	23.96	61.8	28.5	80.1
1903	22.97	59.2	28.4	79.8
1904	21.53	55.5	27.9	78.4
1905	20.30	52.3	27.2	76.4
1906	17.91	46.2	27.1	76.1
1907	18.09	46.6	26.3	73.9
1908	17.54	45.2	26.2	73.6
1909	16.70	43.0	25.6	71.9
1910	16.74	43.1	24.8	69.7
1911	15.97	41.2	24.4	68.5

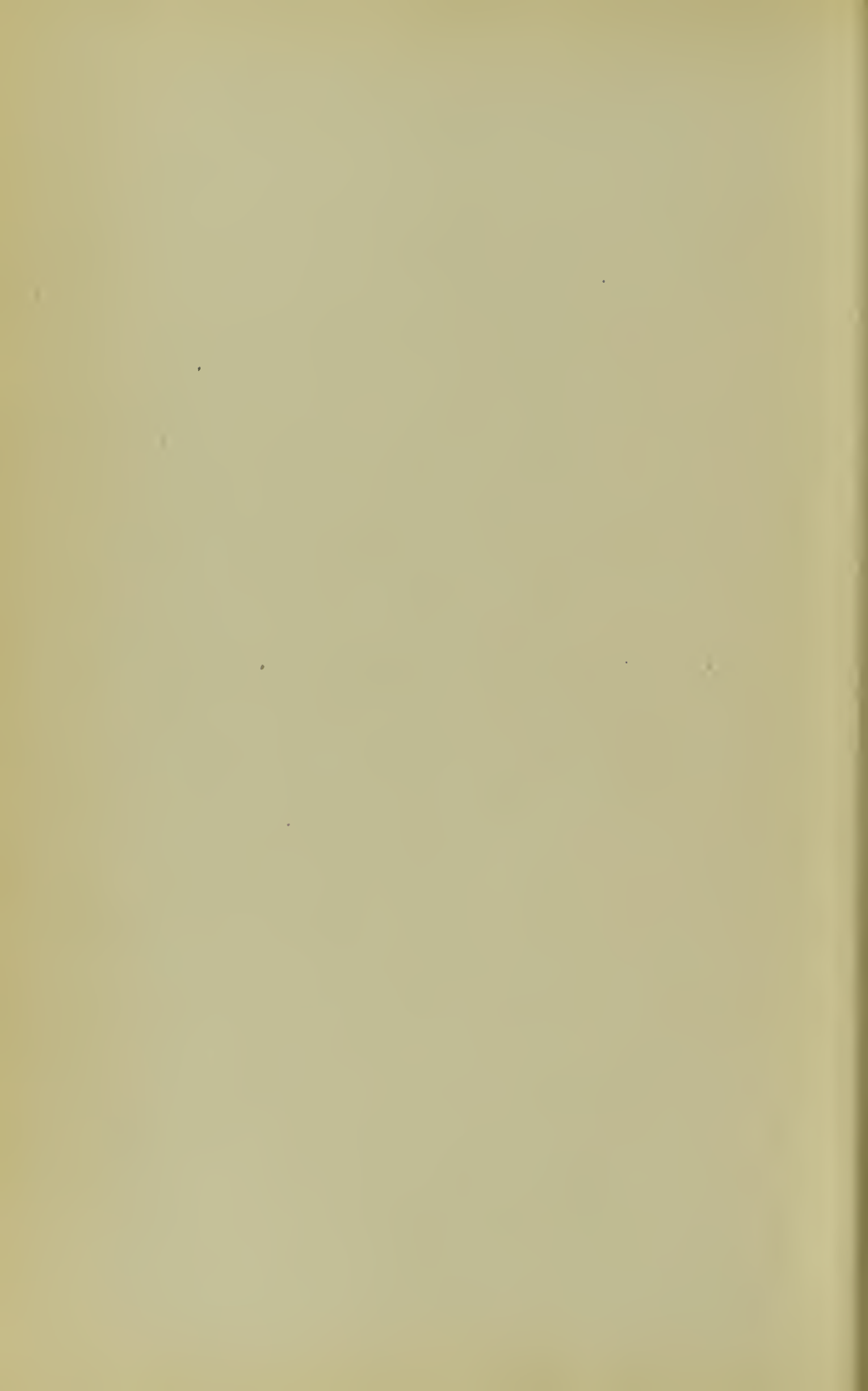
ILLEGITIMATE BIRTH RATE.

There were 79 illegitimate children born during the year, including 16 at the Kirkham Workhouse. This figure gives the following rates :—

- (1) 1.29 per 1,000 of the inhabitants.
- (2) 5.27 per 1,000 females of conceptive age.*
- (3) 8.10 per cent. of the total births.

BIRTH-RATES FOR THE YEARS 1894—1911.





These figures for the past few years have been as follows :—

	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902
(1)	1.29	1.13	1.35	1.14	1.08	1.14	1.24	1.34	1.14	1.11
(2)	5.27	4.61	5.50	4.64	4.39	4.64	5.05	5.47	5.38	4.53
(3)	8.10	6.76	8.09	6.49	5.96	6.35	6.10	6.24	5.75	4.64

The second figure, *i.e.*, the proportion of illegitimate births to women at conceptive ages, is the one which represents best the progress of illegitimacy in the country.

*Calculated on there being 14,987 females at child-bearing age—20 to 45.

DEATHS.

The compilation of mortality rates is much simplified this year, owing to the fact that deaths of non-residents, even when occurring in other places than public institutions, are now to be eliminated from the calculations. There will therefore in this, and in future health reports, not be any confusing references to mortality rates "corrected for visitors."

Based on a population of 61,052, the death-rate for the year was 14.51 per 1,000. The comparison of Blackpool with other portions of the country is as follows :—

England and Wales	14.6	per 1,000
77 Great Towns...	16.4	„
136 Smaller Towns	14.4	„
Rural England and Wales	13.1	„
Blackpool	14.5	„

The chart facing page 22 shows the comparison of the death-rate with that for previous years. The rise in the curve last year is attributable largely to the excessive amount of diarrhoea during the hot summer.

There were deaths of 42 residents in Kirkham Workhouse, and of 38 residents who died away from Blackpool, whose deaths were notified to me by the Registrar General.

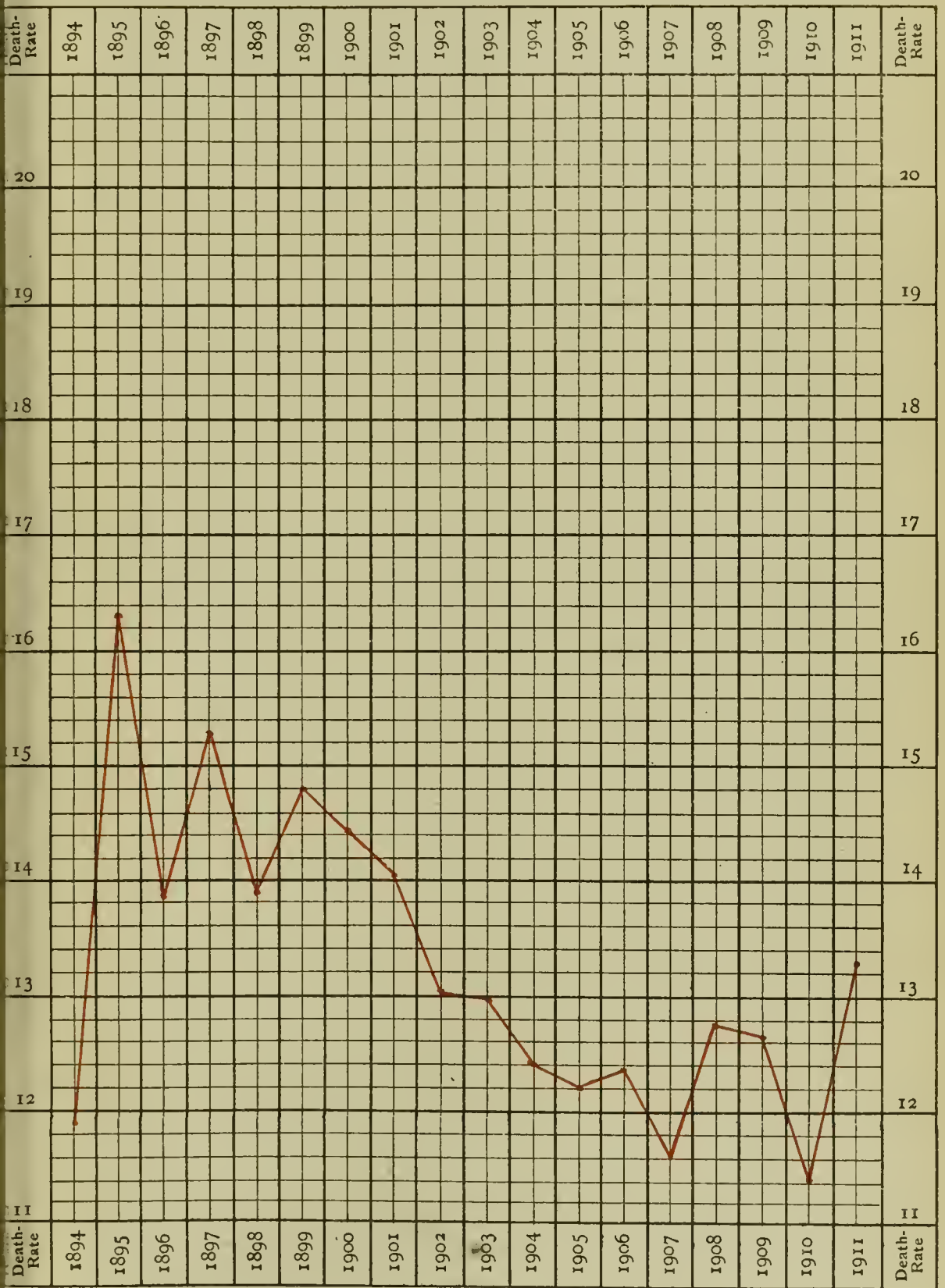
The deaths divided into Males and Females for the four quarters of the year are as follows :--

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Totals
Males ...	93	97	89	114	393
Females .	110	93	118	97	418
Totals ...	203	190	207	211	811

The Ward statistics with regard to deaths and death-rates are as follow :—(the rates for the previous year being included for the sake of comparison).

WARDS.	Estimated Population.	Number of Deaths (Residents)	Death Rate 1911	Death Rate 1910
Claremont.....	11,084	113	10.19	9.58
Talbot	12,227	215	17.58	14.55
Bank Hey.....	1,702	12	7.05	10.02
Brunswick	9,585	119	12.41	10.15
Foxhall	18,290	253	13.83	11.12
Waterloo	8,164	99	12.13	11.37

DEATH-RATES, 1894—1911.





The number of deaths at various ages and the percentage of the total deaths are as follows :—

Age period.	Number of deaths	Percentage of total deaths.
Under 12 months ...	123	15.17
1 and under 5 years .	50	6.17
5 and under 65 years	398	49.07
65 years and over ...	240	29.59

Of the 811 resident deaths in 1911, the causes of 745 or 91.86 per cent. were certified by medical practitioners. Inquests were held respecting 35, or 4.32 per cent., whilst the remaining 31, or 3.82 per cent., were uncertified.

The Table which has appeared in past annual reports giving these figures for a series of past years is omitted, as it refers to gross deaths. I propose commencing a fresh Table this year, containing only resident deaths.

	Certified by Medical Practitioner		Inquest Cases.		Uncertified Cases.	
	Total.	Per cent. of total.	Total.	Per cent. of total.	Total.	Per cent. of total.
1911	745	91.86	35	4.32	31	3.82

CAUSES OF DEATH.

According to the groups of diseases the following deaths occurred :—

		No. of deaths.	Percentage of Total Deaths.
I.	General Diseases	205	25.27
II.	Diseases of the Nervous System and of the Organs of Special Sense	121	14.92
III. ..	Diseases of the Circulatory System	95	11.71
IV....	Diseases of the Respiratory System	91	11.22
V.....	Diseases of the Digestive System	116	14.3
VI....	Non-Venereal Diseases of the Genito-Urinary System and Annexa.....	49	6.04
VII ..	The Puerperal State	5	0.62
VIII ..	Diseases of the Skin and of the Cellular Tissue	3	0.37
IX....	Diseases of the Bones and of the Organs of Loco- motion	2	0.25
X....	Malformations	2	0.25
XI....	Diseases of Early Infaney..	32	3.95
XII...	Old Age	50	6.17
XIII..	Affections produced by external Causes	17	2.09
XIV..	Ill-defined Causes	23	2.84

ALCOHOLISM was certified as causing the deaths of 7 persons, 6 males and 1 female between the ages of 25 and 65. In addition Cirrhosis of the Liver caused 9 deaths, and it is probable that at least some of these were also due to alcoholism.

DIABETES caused 9 deaths of persons at the following ages :—

AGE.	SEX.	NUMBER.
45 to 55 years.....	M.	1
55 to 65 ,,	M.	2
Do. ,,	F.	3
75 years and over	M.	1
Do. ,,	F.	2

In my report for 1908 I recorded the unusual occurrence of a death, from Diabetes, of a child under twelve months of age.

The following are the particulars obtained as to the duration of the disease :—

Under 1 year	1 case.
2 to 2½ years	3 cases.
3 to 3½ ,,	1 case.
5 to 5½ ,,	2 cases.
9 to 9½ ,	1 case.
10 years	1 case.

SYPHILIS was the direct cause of death of two infants under 12 months of age. I feel confident that in the near future Syphilis will have to be included amongst the notifiable diseases, and that administrative measures to prevent its spread will have to be taken by the Sanitary Authority.

Special restrictions should be placed upon the marriage of persons with uncured Syphilis, owing to the tendency for children of the marriage to be born with the disease.

CANCER was the cause of 72 deaths, 30 of which were males, and 42 females. I here reproduce a Table which appeared on page 52 of the 1907 Health Report, and with the 1908, 1909, 1910 and 1911 figures added :—

CANCER MORTALITY IN BLACKPOOL.

YEAR.	Number of Deaths.	Death Rate.	England and Wales.
1895	16	0.486	0.753
1896	17	0.464	0.762
1897	30	0.746	0.785
1898	22	0.484	0.799
1899	34	0.705	0.826
1900	47	0.937	0.829
1901	54	1.064	0.842
1902	47	0.901	0.844
1903	52	0.981	0.872
1904	41	0.755	0.877
1905	54	0.969	0.885
1906	54	0.946	0.917
1907	52	0.890	0.909
1908	51	0.854	0.923
1909	59	0.960	0.952
1910	46	0.765	—
1911	72	1.179	—

It will be observed the number of deaths is greatly in excess of that for any previous year, and that the tendency for the death-rate from this disease is to rise, not only in Blackpool, but in the country generally.

The parts of the body affected with the disease were as follows :—

	Males.	Females.	Total.
Buccal Cavity	3	1	4
Stomach, Liver, etc.	10	12	22
Peritoneum, Intestines and Rectum	4	10	14
Female Genital Organs	—	10	10
Breast	—	3	3
Skin	1	—	1
Unspecified	12	6	18
Total	30	42	72

and the deaths occurred in the following age groups :—

25 to 35 years	...	...	...	...	5 cases.
35 to 45 „	...	...	...	...	5 cases.
45 to 55 „	...	...	...	...	14 cases.
55 to 65 „	...	...	...	...	21 cases.
65 to 75 „	...	...	...	...	20 cases.
75 years and over	...	...	...	...	7 cases.

Enquiries have been made into the family history of the cases, and the following results were obtained :—

Father died of Cancer	...	...	...	...	1 case.
Mother died of Cancer	...	...	...	...	2 cases.
Grandmother and Mother died of Cancer	...	...	...	...	1 case
Brother died of Cancer	...	...	...	...	1 case.
Cousin died of Cancer	...	...	...	...	1 case.
Aunt died of Cancer	...	...	...	...	1 case.
No information	...	...	...	...	2 cases.
No family history of Cancer	...	...	...	...	63 cases.

Offers of disinfection have been made in all the cases, but in 14 only was disinfection by the Health Authority accepted. In the other cases it was done by the occupiers.

APOPLEXY and its allied conditions were the causes of 69 deaths. The record for the past eleven years has been as follows :—

Year.	Residents.		Total
	Males.	Females	
1901.....	17	17	34
1902.....	18	17	35
1903.....	25	10	35
1904.....	17	18	35
1905.....	10	32	42
1906.....	20	26	46
1907.....	27	24	51
1908.....	28	42	70
1909.....	26	16	42
1910.....	26	37	63
1911.....	33	36	69

The age groups of the 1911 cases were as follows :—

0 to 1 year	1 case.
45 to 55 years	11 cases.
55 to 65 „	20 cases.
65 to 75 „	26 cases.
75 years and over	11 cases.

It will be observed that the usual age incidence of Apoplexy is borne out by the 1911 results, viz., its more frequent occurrence between the ages of 55 and 75. A death from apoplexy under one year, as occurred in 1911, is very exceptional.

CONVULSIONS was vaguely attributed as the cause of 9 deaths, 7 of which were males and 2 females. All were under the age of 5 years. It would be more satisfactory if this term were only applied when it is not possible to indicate the cause of the convulsions, as they are only symptoms, not a disease in themselves.

OLD AGE was attributed as the cause of death of 49 persons, 36 of whom were over 75 years of age.

DISEASES OF THE HEART claim a large number of victims, 87 deaths being attributed to them. Of these 87, 62 were valvular disease, and the remaining 25 were classed under the general designation of "other diseases."

DISEASES OF THE RESPIRATORY SYSTEM apart from Phthisis accounted for 91 deaths.

The months in which these deaths occurred were as follows :—

January	10	July	2
February	14	August	6
March	8	September	2
April	8	October.....	11
May	6	November.....	9
June	6	December	9

The record of these diseases for the past few years has been as follows :—

Year.	Cases.	Year.	Cases.
1901.....	115	1907.....	117
1902.....	112	1908.....	106
1903.....	96	1909.....	140
1904.....	99	1910.....	108
1905.....	90	1911.....	91
1906.....	93		

PHTHISIS.

Compulsory notification of all poor law cases and voluntary notification by medical practitioners has been in force all through the year. In March, 1911, compulsory notification was further extended by an order of the Local Government Board applying to patients of voluntary Hospitals.

During the year the following notifications were received by me :—

Poor law cases	7
Private cases	26
Hospital cases	11
	<hr/>
	44
	<hr/>

When it is realised that the number of actual deaths was 50 for the year, the notification system recently in force cannot be said to have been adopted to such an extent as to make it satisfactory.

I am glad to be able to report that this apologetic method of dealing with the subject is now over, and from the 1st of January 1912, the disease has been made compulsorily notifiable in all class of cases.

Having obtained a knowledge of the incidence of the disease in the town, and of the conditions under which the patients are living, three courses of action can be taken :—

- (i) VISITATION OF HOMES.—I have undertaken this duty personally, and cases have been advised on precautions which should be adopted to prevent spread—*e.g.*, sleeping alone, open windows, disposal of sputum, &c.
- (ii) DISPENSARY WORK.—This is undertaken in many towns where administration of tuberculin is combined with home visiting. I intend taking an early opportunity of visiting the dispensaries in London and Portsmouth, and reporting to the Health Committee on the matter. At present Tuberculin is provided gratuitously to necessitous cases, but its administration is left entirely to the medical practitioners.
- (iii) SANATORIUM PROVISION.—We have at present no hospital accommodation for cases of consumption. An application has been made to the Local Government

Board for sanction to use the Smallpox Hospital at Elswick for this purpose, but such sanction has been withheld owing to the unsuitability of the site. I consider that it is most important that some provision of this nature should be made for our cases. It would serve a double function :—(1) be a training ground for early cases, from where, after a few weeks, such cases could resume their daily avocation without being a source of danger to others, and (2) be a centre where advanced cases or cases from crowded homes could be removed to.

The Insurance Act, 1911 considerably increases the powers of local authorities to deal with this disease. A capital sum of one-and-a-half millions is available for buildings for the United Kingdom, and 1s. 4d. per head per insured person per annum will be in the hands of the Insurance Commissioners towards the maintenance of patients in Sanatoria or in such other direction as the Sanitary Authority may extend its efforts. However diverse may be the opinions on certain aspects of this Act, I have not yet heard any adverse criticism on its method of dealing with the subject of consumption.

Before giving details of the 1911 cases, I desire once more to put prominently before the Town Council and any others who may read this report how advisable it is that Sanitary Authorities should have compulsory powers to disinfect thoroughly all premises which have been occupied by consumptive persons, and that it should be a penal offence to allow such premises to be occupied without previous disinfection,

Phthisis accounted for 51 deaths during the year. The ages at death, and the months in which they occurred, were as follows :—

			Males.	Females.
5 to 15 years	...	...	—	4
15 to 25 „	...	...	3	8
25 to 35 „	...	...	2	5
35 to 45 „	...	...	5	5
45 to 55 „	...	...	9	1
55 to 65 „	...	...	3	2
65 to 75 „	...	...	2	2
			<hr/>	<hr/>
			24	27
			<hr/>	<hr/>

January	.....	5	July	.....	7
February	.....	7	August	.....	3
March	.....	4	September	...	2
April	.....	4	October	.....	—
May	.....	8	November	.....	7
June	.....	2	December	.....	2

Inquiries into the family history of the fatal cases of Phthisis revealed the following :—

One parent died of Phthisis	...	4 cases.
A brother or sister died of Phthisis	...	3 cases.
Husband „	...	1 case.
Father and other relatives died of Phthisis	...	1 case.
A grandparent died of Phthisis	...	1 case.
No family History of Phthisis	...	34 cases.
No information	...	7 cases.

The duration of illnesses was as follows :—

1	to	6	months	...	...	...	6 cases.
6	to	12	months	...	...	...	10 cases.
1	to	1½	years	...	...	...	10 cases.
1½	to	2	„	...	...	...	5 cases.
2	to	2½	„	...	...	...	10 cases.
3	to	3½	„	...	...	...	2 cases.
4	to	4½	„	...	...	...	1 case.
5	to	5½	„	...	...	...	1 case.
7	to	7½	„	...	...	...	2 cases.
8	to	9	„	...	...	...	1 case.
Indefinite			...	...	...	...	3 cases.

Disinfection of the premises by means of a formalin spray has been offered in each case. In 44 cases disinfection was carried out by the Health Authority, in two cases by the occupier, and of the remaining five cases I have no information.

Fifty-four specimens of sputum have been submitted for bacteriological examination. Forty-four of these gave a negative and ten a positive result.

The number of deaths and death-rates from Phthisis in the past eleven years have been as follows :—

Year.	Number of Deaths.	Death-rate for Residents.
1901	37	0.73
1902	45	0.86
1903	35	0.74
1904	47	0.86
1905	51	0.92
1906	39	0.68
1907	50	0.86
1908	47	0.86
1909	45	0.73
1910	38	0.63
1911	51	0.83

WHOOPING COUGH caused 7 deaths, all under the age of five years (and of these, 2, or 28 per cent., were infants under 12 months of age). The Wards affected were : Brunswick 2, Foxhall 4, Waterloo 1.

The months in which the deaths occurred were as follows :—

March	2	May	2
April	1	July	2

The numbers of deaths in previous years have been as follows :—

1910	1909	1908	1907	1906	1905	1904	1903	1902	1901
—	—	—	—	—	—	—	—	—	—
10	6	10	5	6	3	2	19	3	10

INFLUENZA caused 2 deaths, as compared with 4, 19, 12, 11 and 14 in the five years immediately preceding. The age incidence, and the months in which the fatal cases occurred, were as follows :—

35 to 45—1	April ...	1
Over 85—1	October	1

The circular of the Local Government Board relating to Annual Health Reports expresses a request that reference will be made to the amount of poor law relief, and the extent to which Hospital and other forms of gratuitous medical relief are utilised.

I am obliged to Mr. Dixon, the relieving officer, for the following information :—

A SUMMARY OF PERSONS WHO HAVE RECEIVED OUT-RELIEF
IN BLACKPOOL DURING THE YEAR 1911.

Males, 156 temporarily disabled and 103 not able bodied	259
Females, 219 in health (widows, &c.) with children, and 207 not able bodied	426
Children under 16 years of age	590
Total ...	<u>1,275</u>

Included in the above number, 387 were sent to the Union, viz. :—

138 under 30 years of age.
165 over 30 and under 60.
84 over 60.

In addition to the above, 838 were sent to the casual ward at Kirkham from Blackpool.

I am obliged to Mr. T. Loftos, the Hon. Secretary of the Victoria Hospital, for obtaining the following information for me.

VICTORIA HOSPITAL, 1911.					
	Medical.		Surgical.		Total.
	Males.	Females.	Males.	Females.	
In patients	149	105	198	132	584
Out „	696	691	374	143	1904
			Total ..	.....	2,488

I have not received the figures relating to the Foxton Endowed Dispensary.

EPIDEMIC DIARRHŒA.

The following circular letter of the Local Government Board was received and submitted to the Health Committee :—

LOCAL GOVERNMENT BOARD,

WHITEHALL, S.W.,

18th August, 1911.

SIR,

The Local Government Board have had under their consideration the excessive child mortality, especially from diarrhœa and enteritis, which is accompanying the very hot and dry summer of the present year. They realise that some excess of mortality over that occurring in cool and wet summers is inevitable: but they desire to impress upon the Council the importance of taking such special steps as are practicable with a view to minimising the excess.

The Board are aware that in a large number of sanitary districts special efforts are made each summer to remove the nuisances and other conditions which favour excessive mortality amongst children. They suggest the following lines along which it is most important that action should be taken, but they do not wish it to be understood that this advice covers the entire ground or that it does not need to be supplemented by action directed towards the special needs of individual districts.

Firstly, it is important that exact advice should be given as to the feeding and management of children, and more generally as to preventing the exposure of their food to contamination from decomposing organic matter. The distribution of clearly worded leaflets is useful in this connection: but even more important are personal visits and the offer of practical advice to the mothers of babies born within the last twelve months. Exact and simple instructions are most likely to be followed if given during a period of special danger. In districts and towns in which the Notification of Births Act has been adopted, the records obtained under that Act will give valuable information in selecting the homes to which visits are now most urgently required.

Secondly, the full value of the personal instructions indicated above cannot be realised unless vigorous efforts are made to

prevent the accumulation in or in the vicinity of the house of decomposing animal and vegetable matter. It is not necessary to do more than mention the importance of efficient scavenging, of frequent and, if practicable, daily removal of house and stable refuse, of domestic cleanliness, and of keeping all food properly protected. The Council may consider it advisable during the next few weeks to divert the sanitary inspectors from less urgent work, and to instruct them to make rapid visits with a view to securing efficient sanitation, especially in and about the houses of the working classes.

Thirdly, it is important that the Council should promptly ascertain in which parts of their district diarrhœa is especially prevalent, and should devote close attention to street and court scavenging and to the removal of stable and domestic refuse in these areas. Without waiting for the weekly death returns, efforts should be made to obtain information of cases of diarrhœa from health visitors and others who make domestic visits; and to impress upon parents the importance of immediate treatment of infantile diarrhœa. Apart from the medical notification of cases of epidemic diarrhœa in children, the visits of health visitors can be utilised for impressing upon parents the seriousness of diarrhœa amongst young children and the desirability of information being given to the Medical Officer of Health should a case of diarrhœa occur.

The Board will be glad if the Medical Officer of Health, in his annual report dealing with the current year, will set out the course of action adopted in the district to prevent diarrhœa and child mortality generally, in the special circumstances of the present year.

I am to request that you will at once hand the additional copies of this circular to the Medical Officer of Health.

It will be put on sale and further copies can be obtained from Messrs. Wayman and Sons, Ltd., Fetter Lane, E.C., either directly or through any bookseller.

I am, Sir,

Your obedient Servant,

H. C. MONRO.

The Health Committee at once decided to make the disease voluntarily notifiable for a period of three months, and instructed the Medical Officer of Health to carry out the recommendations contained in the circular letter.

I sent a copy of the following letter to each of the medical practitioners in the town :—

PUBLIC HEALTH OFFICE,
SEFTON STREET,
BLACKPOOL,

21st August, 1911.

DEAR SIR,

EPIDEMIC OF DIARRHŒA OR ZYMOTIC
ENTERITIS.

The excessive prevalence of hot and dry weather which we have recently experienced is leading to an abnormally high death rate from the above.

I shall be greatly obliged if you will notify me of all cases of Diarrhœa in Infants which you may be attending (fatal or otherwise), in order that I may direct my staff of Inspectors to pay particular attention to the districts in which the disease may be prevalent.

If it is desired that the actual houses invaded should not be visited, kindly state this on the certificate.

The ordinary notification form should be used for the purpose, and I will ask the Health Committee to authorise me to pay the usual notification fee of 2/6 for each notification.

I beg to remain, yours faithfully,

E. W. REES JONES,

Medical Officer of Health

Prior to notification, 15 deaths from this disease had occurred, but I have no information as to the actual number of non-fatal cases.

Subsequent to notification, 181 cases were reported to me—99 in August, 79 in September, and 3 in October, and of these cases 22 proved fatal.

There were also 24 deaths of cases which had not been notified—making a total death list of 61 cases.

A spot map was kept at the office, indicating the locality of the cases, and from this map I was able to decide upon what districts or streets to direct the energies of the Health Visitor and District Inspectors.

The Health Visitor visited all the infected houses, and also the houses in the district where births had recently occurred and gave the necessary advice on the storage of food, and on the feeding of the Infants. The Notification of Births Act, which is in force, supplied all the necessary information as to houses which it was desirable to visit.

As far as it was possible, also, the whole Inspectorial staff was engaged in inspecting the streets and districts affected, and special attention was paid to the frequent removal of manure, the emptying of ash receptacles, the free ventilation of houses, and the cleansing of gullies.

At this time the Fylde Water Board commenced placing restrictions upon the use of water, and the cleansing

and flushing of back yards was not carried out as freely as could be desired. The sewers were flushed with sea water very liberally.

Investigations into the fatal cases revealed the following :—

AGES.

under 1 month	2	6 to 7 months	5	1 to 2 years	4
1 to 2 months	11	8 to 9 months	1	2 to 3 years	1
2 to 3 months	8	9 to 10 months	2	4 to 5 years	1
3 to 4 months	4	10 to 11 months	1	34 years	1
4 to 5 months	4	11 to 12 months	1	Over 50 years	9
5 to 6 months	6				

WEEKS IN WHICH DEATHS OCCURRED.

Feb. 19-25	1	Aug. 13-19	5	Sept. 24-30	3
March 12-18	1	Aug. 20-26	10	Oct. 2-7	5
June 11-17	1	Aug. 27-Sept. 2 ...	7	Oct. 8-14.....	3
July 30-Aug. 5 ...	2	Sept. 3-9	6	Oct. 15-21	1
Aug. 6-12	5	Sept. 10-16	10	Oct. 29-Nov. 4 ...	1

BACK STREETS.

Paved 45.

Not formed 12.

No Back Street 4

YARDS.

Flagged 54.

Bricked 2.

Asphalted or concreted 5.

Not formed 0.

FOOD STORAGE.

Scullery 42. Living Room 3.
 Pantry 7. Sitting Room 2.
 No Information 7

PERIODS BETWEEN ONSETS AND DEATHS.

Days.	Cases.	Days.	Cases.	Days.	Cases.	Days.	Cases.
1	4	8	1	17	1	42	2
2	4	10	3	20	3	45	1
3	4	11	1	21	4	56	1
4	2	13	1	22	1	77	2
5	3	14	2	27	1	No	} 4
6	6	15	1	37	1	Inform-	
7	5	16	2	38	1	mation	

LEGITIMATE (under 12 months) 39. ILLEGITIMATE 6.

PATENT FOODS used in 14 cases.

SUSPECTED CAUSES.

Heat 13. Flies 2.
 Teething 3. Unsuitable Food 1.
 Irregular Feeding 3. Rupture 1.
 Previous case 1.

NUISANCES IN NEIGHBOURHOOD.

Manure Receptacles 9. Ashpits 1.
 Cesspools 0. Pail Closets 0.

The number of deaths from Diarrhœa for each of the past few years is as follows :—

1901	35	1905	27	1909	9
1902	9	1906	32	1910	21
1903	23	1907	9	1911	61
1904	35	1908	23	—	—

INFANT MORTALITY.

123 children died in the town during 1911, before reaching the age of 12 months, giving an Infant Mortality rate of 126 per 1,000 births.

The Chart and Table on pages 44 and 45 respectively will show at a glance the comparison with former years. The prolonged period of hot weather and the extended drought which we experienced last year is entirely responsible for the high infant mortality figure for the year. Great difficulty under conditions such as these must be experienced in the storage of food in the smaller houses. The shortage of water also curtailed considerably the flushing of yards and drains. I note with very much satisfaction the extension of the salt water mains about the town. It seems anomalous that conditions prejudicial to health should prevail in the town owing to the shortage of water, when an unlimited supply of sea-water is available which in many respects will answer all the purposes of fresh water.

Under the heading of Diarrhœa I have described in detail the action taken by the Health Department at the instructions of the Health Committee to deal with the

abnormal conditions of last summer. It is not necessary, therefore, for me to deal with the matter any further.

Some satisfaction may be obtained from the reflection that while we are not satisfied with the Infant Mortality rate for 1911, ten or fifteen years ago we should have hailed it with much delight as a relief from the somewhat consistently high rate of those years. I hope and I anticipate that the rate for the present year, 1912, will once more be in keeping with the tendency to a lowering of the rate which has existed recently.

The Blackpool figure compares with other parts of the country as follows :—

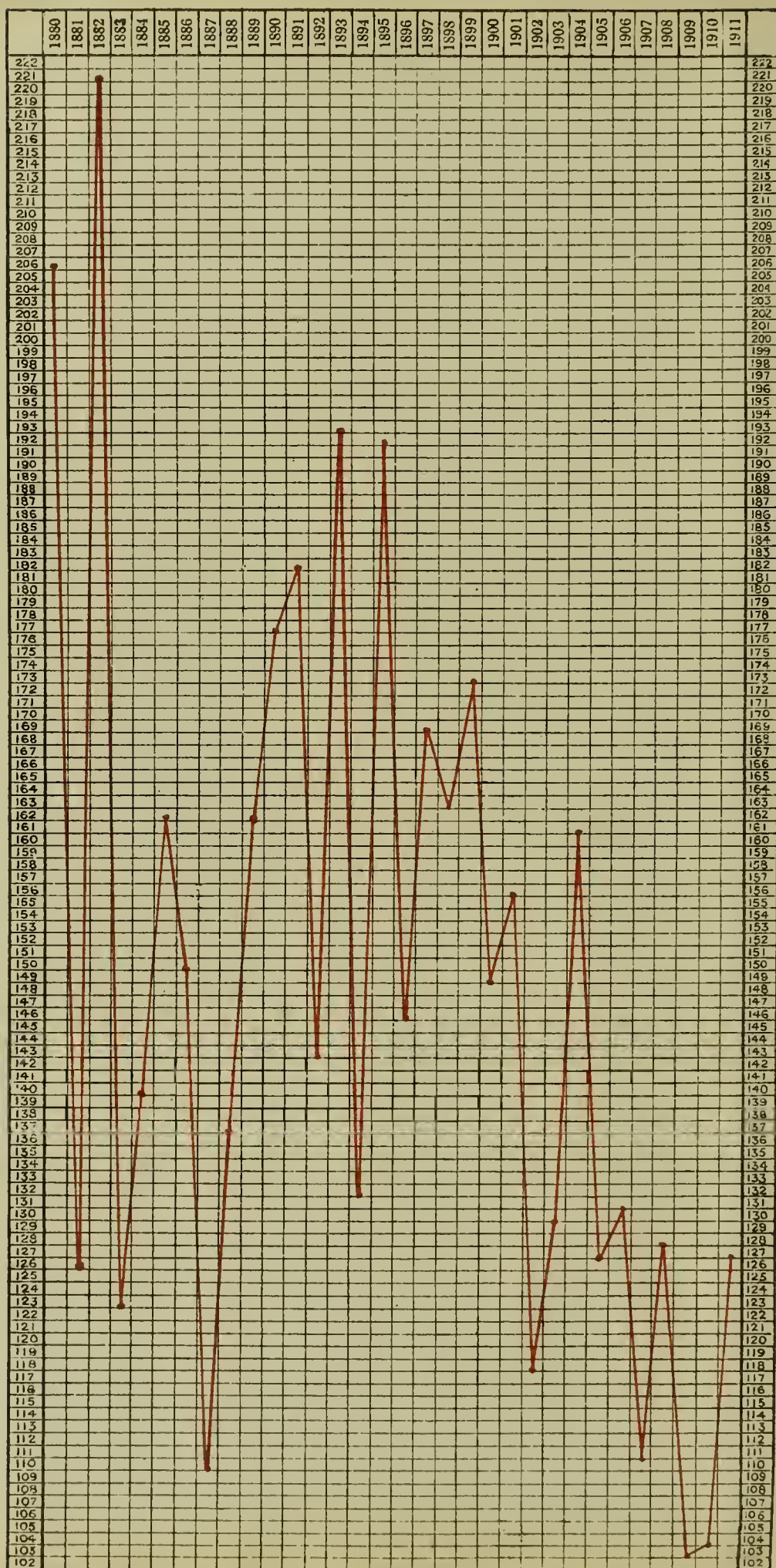
England and Wales	...	...	...	...	130
77 Great Towns	...	...	...	...	140
136 Smaller Towns	...	...	...	...	133
Rural England and Wales	...	...	...	...	118
Blackpool	...	...	...	...	126

(Blackpool is included among the smaller towns.)

The rates for the four quarters of the year were as follows :—

1st quarter	...	...	...	...	118.94
2nd „	...	...	...	...	67.67
3rd „	...	...	...	...	207.84
4th „	...	...	...	...	114.54

CHART SHOWING INFANTILE MORTALITY from 1880 to 1911.



The following Table gives the infant death-rate, per 1,000 births, for the past 33 years, and the Chart represents in a more diagrammatic manner the fluctuations from year to year :—

INFANT MORTALITY, 1879-1911.

Rate per 1,000 Births.

Year.	Blackpool.	England and Wales.
	Residents only.	
1879	122	135
1880	206	153
1881	126	130
1882	221	141
1883	123	137
1884	140	147
1885	162	138
1886	150	149
1887	110	145
1888	137	136
1889	162	144
1890	177	151
1891	182	149
1892	143	148
1893	193	159
1894	132	137
1895	192	161
1896	146	148
1897	169	156
1898	163	160
1899	173	163
1900	149	154
1901	156	151
1902	118	133
1903	130	132
1904	161	145
1905	127	128
1906	131	133
1907	111	118
1908	128	121
1909	103	109
1910	104	106
Mean of 32 years ...	148	141
1911	126	130

With regard to Infant Insurance the following results were obtained :—

Insured between £1 and £1 10s. ...	5 cases.
„ between £2 and £3	12 „
„ over £3	2 „
„ but not in benefit	3 „
„ but amount not stated ...	14 „
Not insured	77 „
No information	10 „

In 17 cases only were the mothers employed away from home, and as I have before stated, this is one of the reasons why we should not be satisfied until our infant Mortality rate reaches and remains at 100.

The months in which the Infantile deaths occurred were :—

January	11	May	5	September	19
February	8	June	6	October	15
March	7	July	7	November	4
April	8	August	27	December	6

Fourteen infants died before they were fed, the majority of these being cases of premature birth. 68 out of the 123 deaths, or 55 per cent., occurred during the first three months of life. The importance of making any effort to reduce the Infant Mortality as soon as possible after birth is once more emphasised, and it is in this respect that the Notification of Births Act is of so much value.

Only 27 of the 123 children were breast fed. It has almost developed into a platitude to say that a breast-fed child has a much better chance of life than a child not breast fed. Year after year, however, our enquiries reveal accumulating evidence in support of this statement, and such evidence must have a practical bearing upon our work, or it is useless. The main duty of a Health Visitor is to impress upon mothers the importance of persevering with the breast milk, even if in some cases it has to be supplemented with cows milk, suitably prepared according to the age of the child. A lowered Infant Mortality means a healthier lot of children, and when we recollect the low birth rate which we cannot influence, the importance of the Infant Mortality which we can influence is apparent.

Inquiries into the Infantile deaths have been made by the Health Visitor, and the conditions found with regard to feeding were as follows :—

DEATHS UNDER ONE.—TOTAL.
(CALENDAR QUARTERS.)

CAUSES.	YEAR.		QUARTERS.								FEEDING.			Mother employed away from home.	Illegitimate.
	Under 3 months.	Total.	First.		Second.		Third.		Fourth.		Not Fed.	Breast Fed.	Hand Fed partly or entirely.		
			Under 3 months.	Total.	Under 3 months.	Total.	Under 3 months.	Total.	Under 3 months.	Total.					
1.—Common Infectious Diseases (Measles, Diphtheria, and Whooping Cough	—	7	—	3	—	2	—	1	—	1	—	1	6	—	1
2—Diarrhoeal Diseases :— Diarrhoea, Enteritis, and Gastritis	22	49	2	4	1	2	17	5	2	8	—	10	39	9	6
3.—Wasting Diseases :—Pre-mature Birth, Congenital Defects, &c.	18	19	3	3	7	7	4	5	4	4	10	5	4	5	5
4.—Debility	13	18	3	3	2	2	3	6	5	7	1	2	15	—	1
5.—Tubercular Diseases.....	—	1	—	—	—	1	—	—	—	—	—	—	1	—	—
6.—Other Causes { Convulsions Bronchitis..... Pneumonia Other causes ...	4 3 1 7	9 3 5 12	2 3 — 2	5 3 1 4	1 — 1 3	1 — 1 4	1 — — —	3 — — 1	— — — 2	— — 3 3	1 — — 2	3 2 1 3	5 1 4 7	1 — — 2	2 1 — 2
Totals	68	123	15	26	15	20	25	51	13	26	14	27	82	17	18

DEATHS FROM VIOLENCE.—The number of deaths classified under this heading was 17 for the year 1911, as compared with 16 in 1910 and 25 in 1909. They are classified thus :—

	Suicide.	Accident.	Total.
Asphyxia	1	—	1
Hanging	1	—	1
Drowning	—	2	2
Cutting or Piercing Instruments	1	1	2
Crushing	1	—	1
Burns	—	3	3
Injury by fall.....	—	3	3
Electricity	—	1	1
Other Violence	—	3	3
Totals	4	13	17

INQUESTS.

The number of inquests held during the year was 35. The rate of inquest deaths was 43 per 1,000 deaths, as compared with 70 per 1,000 deaths in England and Wales.

The following is an analysis of the verdicts :—

ACCIDENTAL		—
Burns	1	
Contusions	1	
Drowning	1	
Electric Shock	1	
Fall downstairs	2	
Fall down Lift	1	
Fall from Cab through Epileptic Seizure	1	
Fall	1	
Motor Accident	1	
Scald	2	
Suffocation	1	
SUICIDE.		
Cutting throat with razor	1	
Run over by Railway Train	1	
Suffocation by Coal Gas	1	
Hanging	1	
NATURAL AND OTHER CAUSES.		
Alcoholism	1	
Aneurysm	1	
Apoplexy	1	
Bronchitis	2	
Convulsions	1	
Chickenpox	1	
Diarrhœa	1	
Exhaustion through exposure	1	
Found drowned	1	
Heart Disease	2	
Lead Poisoning	1	
Nephritis	1	
Phthisis	2	
Ulceration of Bowel	1	
Want of attention at Birth	1	

PART II.

INFECTIOUS DISEASES.

NOTIFICATION OF INFECTIOUS DISEASES DURING THE YEAR.

The following notifications were received :—

Scarlet Fever	...	...	...	84
Diphtheria ...	...	...	...	40
Enteric Fever	...	...	...	39
Puerperal Fever	...	...	...	5
Erysipelas ...	...	...	...	26
Measles	...	...	...	1,181
				<hr/> 1,375 <hr/>

The comparison of these figures with those for previous years up to 1894 will be seen in the Table on page 53. Diphtheria was less prevalent than it has been since 1900, *i.e.*, a period of eleven years. Scarlet fever was less prevalent than in any year since 1898, *i.e.*, thirteen years. The figure for enteric fever, viz., 39, compares with 12 for 1910, 39 for 1906, 28 for 1904, but in all other years since 1894 the figure for the year under review has been exceeded. Measles was again prevalent during the year, there being 1,181 cases notified. This figure has only been exceeded in the years 1904 and 1908, when it was 1,386, and 1,268 respectively.

The notifications, as they occurred month by month, are seen in the following Table :—

(Cases of Infectious Disease notified.)

DISEASE.	January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	TOTALS.
Small Pox.....	—	—	—	—	—	—	—	—	—	—	—	—	—
Measles	301	390	111	22	16	14	18	27	6	35	126	115	1,181
Scarlet Fever	8	5	8	3	12	5	9	11	9	2	6	6	84
Diphtheria ...	—	7	2	6	2	—	5	2	2	3	7	4	40
Membranous . Croup	—	—	—	—	—	—	—	—	—	—	—	—	—
Enteric Fever	3	4	2	3	1	2	6	3	7	3	3	2	39
Puerperal Fever.....	1	1	—	—	—	—	1	—	1	—	1	—	5
Erysipelas....	1	2	1	3	—	1	2	2	3	7	2	2	26
Chicken Pox..	6	3	4	2	7	11	6	1	4	11	51	28	134
TOTALS	320	412	128	39	38	33	47	46	32	61	196	157	1,509

In Table II. in the Appendix will be found a classification showing the number of persons attacked at various age-periods, and also the number of cases removed to Hospital.

Cases of Infectious Diseases notified during the years 1894-1911 (inclusive).

	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911
Smallpox	20	8	—	—	—	—	—	4	2	22	8	3	9	—	—	—	—	—
Diphtheria	11	17	6	7	10	13	24	131	74	40	43	48	53	84	61	96	41	40
Membranous Croup.....	2	—	—	—	—	—	—	3	1	—	3	1	1	—	—	—	—	—
Erysipelas.....	—	—	—	—	—	—	14	13	13	19	26	17	18	13	18	38	20	26
Scarlet Fever	76	154	208	177	77	141	187	271	197	257	179	200	183	177	238	348	181	84
Typhus Fever	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Enteric Fever	61	79	66	50	67	59	68	58	70	42	28	51	39	41	65	48	12	39
Puerperal Fever	1	1	1	2	5	5	3	2	2	3	5	3	2	2	3	4	7	5
Measles	320	108	148	794	259	370	302	532	863	127	1386	871	389	309	1268	834	660	1181
Rötheln.....	8	2	2	—	—	1	2	5	5	5	13	27	6	1	—	—	—	—
TOTALS	499	369	431	1031	418	589	600	1019	1227	515	1691	1221	700	627	1653	1368	921	1375

SCARLET FEVER.

Notifications, 84. Deaths, 2

The ages and sexes of the notified cases were as follows :—

	Males.	Females.	Total.
Under 5 years	15	7	22
5 to 10 years	23	17	40
10 years to 14 years	4	4	8
14 to 20 years	4	4	8
20 to 25 years	1	—	1
25 to 30 years	1	2	3
30 years and over	1	1	2
Totals	49	35	84

The Ward incidence in each of the four quarters of the year was as follows :—

	1st Quar- ter.	2nd Quar- ter.	3rd Quar- ter.	4th Quar- ter.	Total 1911	1910	1909	1908	1907	1906
Claremont	5	7	4	1	17	45	57	29	32	19
Talbot ..	5	6	4	3	18	32	62	51	39	60
Bank Hey	1	—	—	—	1	1	8	1	7	5
Brunswick	7	3	6	2	18	32	56	32	22	16
Foxhall ..	2	4	13	3	22	50	135	94	50	60
Waterloo.	1	—	2	5	8	21	30	31	27	23
Totals ..	21	20	29	14	84	181	348	238	177	183

The number of notifications received during the year is at the satisfactorily low figure of 84. These cases were distributed evenly throughout the year, with a very slight preponderance in August. There were fourteen weeks during the year in which no notifications were received. No particular portion of the town was specially affected.

It will be observed from the Table on the preceding page that nearly half the cases were children of school age.

The 84 cases occurred in 71 houses. In 61 houses there was one case each; in 7 houses two cases each; and in 3 houses three cases each.

Sixty-nine of the cases, or 82 per cent., were removed to the Sanatorium. This high figure has been maintained in Blackpool for many years, and the necessity for removal of as large a percentage as possible of Infectious Diseases from dwelling houses to an Institution where they are efficiently isolated has been borne in mind.

The case mortality was 2.38 per cent., and the death-rate was 0.03 per 1,000 of the population. The ages and sexes of the fatal cases were:—Male, $3\frac{1}{2}$; Female, $3\frac{1}{2}$ years, respectively.

DIPHTHERIA.

Notifications, 40. Deaths, 6.

The sexes and age groups of the notified cases were as follows :—

	Males.	Females.	Total.
Under 5 years	4	7	11
5 and under 10 years ...	11	7	18
10 and under 14 years ...	3	3	6
14 and under 20 years ...	1	1	2
20 and under 25 years ...	1	—	1
25 and under 30 years ...	—	1	1
30 and over	—	1	1
Totals	20	20	40

The number of notifications received during the year is satisfactorily low, and compares well with records for previous years. 24, or over half of the cases, were in school children between the ages of 5 and 14, and of these 10 were females and 14 males.

The monthly incidence is as follows :—

February ... 7	May 2	September ... 2
March 2	July 5	October ... 3
April 6	August ... 2	November ... 7
		December ... 4

The administrative measures taken to deal with the disease have been (a) free distribution of antitoxin to actual and suspected cases, (b) free bacteriological examinations of throats of patients and contacts, and (c) isolation of cases at the Sanatorium.

Twenty-four of the cases, or 60 per cent., were of children of school age (5 to 14), though no special school was affected, nor was the disease limited to any part of the town. Twenty-six of the cases, or 65 per cent., were removed to Hospital. The ages and sexes of the 6 fatal cases were as follows :—

Male $3\frac{1}{2}$, years Total 1

Females 4, $3\frac{9}{12}$, $4\frac{9}{12}$, 6, 7, years Total 5

—
6
—

Two of the deaths occurred in cases treated in Hospital, and four in cases which were kept at home. The case mortality of the Hospital cases was 7.7 per cent., and of the home cases 28.6 per cent. The total case mortality was 15 per cent., and the death-rate from this disease was 0.098 per 1,000 of the population.

The Ward incidence for the four quarters of the year was as follows :—

	1st Quar- ter.	2nd Quar- ter.	3rd Quar- ter.	4th Quar- ter.	Total 1911	1910	1909	1908	1907	1906
Claremont	2	3	6	4	15	4	19	16	7	17
Talbot ..	2	2	2	—	6	8	16	7	12	11
Bank Hey	—	—	—	—	—	—	3	1	—	1
Brunswick	1	—	—	4	5	4	17	12	13	8
Foxhall .	4	1	1	3	9	20	27	16	28	10
Waterloo.	—	2	—	3	5	5	14	9	24	6
Totals ..	9	8	9	14	40	41	96	61	84	53

In view of the fact that such a large percentage of the cases were in school children, all cases of sore throat in children should be considered suspicious, and should be excluded from school, until the non-infectious nature has been determined.

SMALLPOX.

No cases of this disease occurred in Blackpool during 1911. Between the years 1896 and 1900, inclusive, the town was free from this disease ; then there were cases in each year up to 1906, while 1907, 1908, 1909, 1910, and 1911 were again free.

The increased facilities which are being placed in the way of those who are not ashamed to avoid their moral

obligations to the community, are undoubtedly leading to an increased number of people susceptible to the disease, and therefore, when another outbreak occurs, very stringent measures will have to be taken to prevent it attaining large and unwieldy proportions.

There is **only one safeguard against Smallpox, and that is efficient and recent vaccination.** The dangers of this simple operation are so remote that they may be disregarded.

VACCINATION.

Through the courtesy of Mr. Thomas Dixon, the Registrar of Births and Deaths, I am informed that the number of successful primary vaccinations during the year was 661. This includes those performed by the private practitioners as well as by the public vaccinators. There were also 272 conscientious objectors. These figures are highly unsatisfactory, and mean that the percentage of our population susceptible to Small-pox is large, and is increasing.

The comparison with previous years is as follows :—
1911, 661 ; 1910, 635 ; 1909, 555 ; 1908, 650 ; 1907, 809 ;
1906, 868.

In previous Reports, I have called attention to the anomalous state of affairs, whereby the working of the Vaccination Acts — essentially Sanitary Acts — is in the hands of the Poor Law Authority, and not in the hands of the Health Authority.

MEASLES.

Notifications, 1,181. Deaths, 13.

Measles has been compulsorily notifiable in Blackpool since 1879. Opinion amongst authorities as to the utility of notification of this disease is divided, and in some towns it has been discontinued. Two of the advantages of the system are (i) that an accurate knowledge is obtained as to the incidence of the disease, and therefore the Sanitary Authority has a better guide as to sanitary measures (*e.g.*, the closing of schools), and (ii) the isolation of the patient consequent upon the visits of Sanitary Inspectors reduces very considerably the risks of chest complications. It is regrettable to find that compulsory notification has not permanently reduced the number of cases to any appreciable extent.

The death-rate was 0.21 per 1,000 of the population, while the case mortality was 1.1 per 100 of the notified cases. The actual benefits derived from notification could only be obtained by a comparison of this latter figure. (the case mortality) with that for towns of somewhat the same size in which notification is not in force. This is, however, not obtainable, as in the absence of notification, the actual number of cases is not known, and therefore the case mortality cannot be worked out.

The comparison of the number of cases for 1911 with previous years will be seen on reference to the Table on page 53. It will be observed that the 1911 figure of 1,181

was exceeded in the years 1908 and 1904, when it was 1,268 and 1,386 respectively. Apart from these two years it is in excess of all years up to 1894.

There was not much difference between the sex incidence in 1911. The age incidence may be summarised as follows—nearly half were below 5 years of age (*i.e.*, before school life), nearly half were children of ages between 5 and 14 (*i.e.*, during school life), while the small remainder were over 14 years of age. These divisions of age and sex incidence are given accurately in the following Table :—

	Males	Females.	Total.
Under 5 years	308	291	599
5 to 14 years	300	257	557
14 to 20 years	6	10	16
20 years and over	4	5	9
Totals	618	563	1,181

The 1,181 cases occurred in 745 houses. In 433 houses there was one case each ; in 210 houses two each ; in 87 houses three each ; in 11 houses four each ; in 2 houses five each ; in 1 house six cases ; and in 1 house seven cases.

All the deaths from measles were those of residents, and their ages and sexes were as follows :—

	Males.	Females.	Total.
Under 5 years	5	6	11
5 to 14 years	2	—	2
Totals	7	6	13

While the actual number of cases in the two periods, 0 to 5 and 5 to 14 years, was practically the same, the above Table shows that the deaths in the first period were five times as many as in the second. The age of a child suffering from measles has an important influence upon the probability of recovery, and for each year that an attack is delayed the chances of recovery improve. This very important fact should be borne in mind by the illogical people (in many cases mothers) who say that as long as the child has got to have measles the sooner it is over and done with the better, and who therefore deliberately expose the younger ones to infection. The case may be “over and done with” in a manner not anticipated.

The cases occurred mainly during the early and late portions of the year (*see* diagrammatic Chart at end of report). There was only one week during the year in which no cases were notified, and the majority occurred during the months of January, February, March, November and December. 1,041, or 88 per cent. occurred during these five months.

The Ward incidence for each quarter of the year was as follows :—

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total 1911.
Claremont	187	15	9	34	245
Talbot	163	19	18	85	285
Bank Hey	6	—	—	8	14
Brunswick	94	4	7	41	146
Foxhall	157	13	12	106	288
Waterloo.....	195	1	5	2	203
Totals	802	52	51	276	1,181

Fifty-one cases were removed to the Sanatorium for isolation and treatment, and the Infants' Departments of six schools were closed for measles during the year (*see* page 68).

ENTERIC FEVER.

Notifications, 39. Deaths, 7.

The exceptionally low rate of notification for 1910—viz., 12 cases—has not been maintained during 1911, but the figure for 1911 compares very favourably with other recent years. In previous years up to 1894, as will be seen on the Table on page 53, the 1911 figure of 39 has only been lower in two years, viz., 1904—28, and 1910—12. In 1906

the figure was the same, and in the other years it was exceeded. We may therefore consider our relation to the incidence of Enteric Fever as satisfactory, and also take credit to ourselves that the general sanitary supervision exercised by the Health Committee over the town contributes very largely to this state of affairs.

The months in which the cases were notified were as follows :—

January	... 3	May	... .. 1	September	... 7
February	... 4	June	... .. 2	October	... 3
March	... .. 2	July	... .. 6	November	... 3
April	... .. 3	August	... 3	December	... 2

The case mortality was 18 per cent., and the death-rate was 0.11 per 1,000 of the population.

The ages and sexes of the fatal cases were as follows —

Males of 25, 29, 32, and 38 years respectively, and Females of 24, 55 and 66 years respectively.

The Widal Blood Test has been applied in most of the cases, with the following results :—

Positive, 34 ; negative, 2. In three cases the test was not applied.

The only history obtainable on enquiry into these cases was that in nine of them shellfish had been eaten, and three cases were imported from other districts.

The ages and sexes of the notified cases were as follows :—

AGE PERIOD.	Males.	Females.	Total.
Under 5 years	—	—	—
5 and under 10 years ...	1	2	3
10 and under 14 years ...	2	1	3
14 and under 20 years ...	3	2	5
20 and under 25 years ...	3	1	4
25 and under 30 years ...	3	—	3
30 and over	16	5	21
Totals	28	11	39

Thirty-four cases, or 87 per cent., were removed to Hospital.

In all instances where there are cases under observation, or where the patient is treated at home, typhoid pails are sent, into which the excreta are placed. These pails are changed daily, and their contents burned at the Destructor.

PUERPERAL FEVER.

Notifications, 5. Deaths, 2.

The particulars of the five cases are as follows :—

Attended by Medical Practitioner and Midwife at confinement	...	...	...	2
Attended by Midwife only	...	...	...	1
Attended by other person	...	...	...	2

The onsets of the cases occurred as follows :—

1 day after confinement	...	...	1 case
2 days ,, ,,	...	...	1 ,,
4 days ,, ,,	...	...	1 ,,
7 days ,, ,,	...	...	1 ,,
14 days ,, ,,	...	...	1 ,,

The deaths occurred as follows :—

Nine days after onset	...	...	...	1 case
48 ,, ,, ,,	...	...	...	1 ,,

Two cases were taken to the Sanatorium for treatment.

In each case where a midwife was present she was suspended from attending any other case for a fortnight after she had left, and her instruments, apparatus and clothing were thoroughly disinfected.

ERYSIPELAS.

Notifications, 26. Deaths, 3.

The following were attributed as the causes :—

Injury 3, cold 5, no detected cause 18.

The location of the disease was as follows :—

Face, Head and Neck	...	22 cases.
Arm ... ... ...	...	1 ,,
Leg ... ... ...	...	1 ,,
Eye ... ... ...	...	2 ,,

Two of the cases were removed to the Sanatorium for treatment.

PRECAUTIONS TAKEN AGAINST THE SPREAD OF INFECTIOUS DISEASE.

DISINFECTION.

After cases of the chief notifiable diseases, the houses are fumigated with formaldehyde vapour after washing down the walls and furniture with a solution of perchloride of mercury, or spraying the walls with a solution of formaldehyde. The spraying machines purchased some years ago have given very good results. Clothes, bedding, &c., are removed to the Sanatorium, and disinfected in the steam disinfectors there ; 24,497 articles were so treated during 1911.

In the case of Typhoid Fever and Diphtheria the drains are flushed with a solution of chloride of lime, and in case of an outbreak of disease in a particular district, the sewers in the district are similarly treated.

After cases of Measles, and after deaths from Phthisis or Cancer, fumigation of the room with formaldehyde is carried out.

All typhoid excreta, whether of cases treated at the Sanatorium or at home, are collected in special pails and burned at the Destructor.

Disinfectants are distributed on application at the Health Office to the houses where infectious diseases have occurred.

The drains are tested after all cases of Enteric Fever and Diphtheria, and after Diarrhœa deaths.

The various forms and circulars issued by the Department in connection with Infectious Diseases will be seen in the Appendix to this report.

SCHOOL CLOSURE, 1911.

SCHOOL.	Cause.	CLOSED.	
		From	To
South Shore School (Infants' Department)	Measles	February 10th	February 25th
Marton School (Infants' Department)	do.	do.	do.
Ashburton Road School (Infants' Department)	do.	do.	do.
Waterloo Road School (Infants' Department)	do.	do.	do.
Devonshire Road School (Infants' Department)	do.	February 16th	March 4th
St. John's School (Infants' Department)	do.	do.	do.

The laboratory at the new Offices has enabled me to perform a large number of bacteriological tests. Since the beginning of July the following have been carried out :—

	Positive Result.	Negative Result.
Examination of swabs for Diphtheria Bacillus	29	49
Examination of sputum for Tubercle Bacillus	8	17

The following are the lines upon which we work with regard to the exclusion of infected children from school :—

Persons suffering from, or in contact with, Infectious Disease are to be excluded from School until the expiration of the periods mentioned below :—

SCARLET FEVER.

- 1.—PATIENTS :—(a) Hospital Cases. Two weeks after discharge.
(b) Home Cases. Two weeks after disinfection.
- 2.—CONTACTS :—(a) Hospital Cases. Two weeks after removal to Hospital.
(b) Home Cases. Two weeks after disinfection.

DIPHTHERIA.

- 1.—PATIENTS :—(a) Hospital Cases. Four weeks after discharge.
(b) Home Cases. Four weeks after disinfection.
- 2.—CONTACTS :—(a) Hospital Cases. Two weeks after removal to Hospital.
(b) Home Cases. Four weeks after disinfection.

ENTERIC FEVER AND ERYSIPELAS.

CONTACTS need not be excluded from School.

MEASLES.

1.—PATIENTS :—Four weeks from onset.

2.—CONTACTS :—(a) Infant Scholars. Three weeks from onset of last case.

(b) Other Scholars :—

I.—If had Measles. Not to be excluded.

II.—If not had Measles. Three weeks after onset of last case .

WHOOPIING COUGH.

PATIENTS :—Six weeks, or as long as cough continues.

CONTACTS :—(a) Infant Scholars. Same period as patient.

(b) Other Scholars :—

I.—If had whooping cough. Not to be excluded.

II.—If not had whooping cough. Same period as patient.

MUMPS.

PATIENTS :—Three weeks.

CONTACTS :—Not to be excluded.

CHICKEN POX.

PATIENTS :—Three weeks, or until all scabs have disappeared.

CONTACTS :—(a) Infant Scholars. Same period as patients.

(b) Other Scholars. Not to be excluded.

The above periods are liable to alteration in individual cases on instructions from the Medical Officer of Health.

THE SANATORIUM.

The number of cases of various diseases admitted to and discharged from the Sanatorium during the year will be seen in the following Table :—

CASES TREATED IN SANATORIUM.

		Remaining in at end of 1910.	Admitted during 1911.	Discharged during 1911.	Died during 1911.	Average stay of non-fatal cases.	Average stay of fatal cases.	Remaining in at end of 1911.
Scarlet Fever	M. F.	4 6	37 32	39 31	1 1	45 42	13 3	1 6
Diphtheria	M. F.	— —	12 14	11 12	1 2	32 30	6 2	— —
Enteric Fever	M. F.	2 2	26 8	21 8	5 2	58 44	28 20	2 —
Measles	M. F.	— 1	26 25	23 23	1 2	15 14	12 13	2 1
Puerperal Fever	M. F.	— 1	— 2	— 3	— —	— 37	— —	— —
Erysipelas.....	M. F.	— —	— 2	— 2	— —	— 10	— —	— —
Other Diseases	M. F.	— —	6 7	6 6	— 1	19 18	— 44	— —
Totals	—	16	197	185	16	—	—	12

The number of cases treated during the year was very small as compared with previous years.

1911 ... 213	1908 ... 402	1905 ... 270
1910 ... 303	1907 ... 312	1904 ... 254
1909 ... 477	1906 ... 304	

The complications of the Scarlet Fever cases were as follows :—

Nephritis (Inflammation of the Kidneys)					3 cases.
Discharging Ear or Nose	...	...	...	5	„
Peeling on admission	...	...	...	4	„
Heart Disease	...	...	...	1	„
Chicken Pox on admission	...	...	...	1	„
Meningitis	...	...	...	1	„
Measles	...	...	...	1	„

There was one return case during the year, and one of the Nursing Staff developed Scarlet Fever.

Most of the cases of Diphtheria were given Antitoxic serum on admission. One case was moribund on admission, and two cases developed paralysis of the soft palate as indicated in a nasal twang of the voice.

One case was said to have had three previous attacks of the disease.

The cases classed as other diseases were as follows :—

Suspected Diphtheria	...	...	...	10 cases.
„ Enteric Fever	...	...	...	1 „
„ Scarlet Fever	...	...	...	2 „

These cases were isolated and kept under observation until the non-infectious nature of their disease was determined.

The Sanatorium has, as in past years, been managed in an efficient and economical manner by the Matron, Miss Procter, and all the Nursing Staff have been most assiduous in their devotion to the patients. I venture to state that there are few institutions which are spoken of so well by past patients as your Sanatorium.

The details of the cost of the Hospital, as nearly as can be ascertained, are appended.

INFECTIOUS DISEASES HOSPITAL.

(SANATORIUM.)

	£
Matron	90
Porters, Nurses, and other salaries	502
Provisions for Inmates, Staff, &c.	575
Gas, Coal, Water, Rates and Taxes, and Insurance ...	599
Furniture, Cutlery, Crockery, &c.	47
Building Repairs, Painting, &c.	41
Gardening	86
Materials for Uniforms	51
Medicine and Medical Appliances	82
Washing and Cleaning Materials	70
Advertising, Printing and Stationery	26
Miscellaneous	71

	2,240
Less Receipts from Inmates	77

	2,163
Interest and Sinking Fund	1,414
Special Expenditure, Renewal of Household Furniture, &c.	39

	3,616

By keeping a daily record of all the inmates of the Hospital (patients and staff) I have been able to estimate accurately the cost of the maintenance per head per week. This includes feeding only (groceries, greengroceries, milk, fish, bread and meat), and works out at an average for the year of 5s. 4d. per head per week. I consider this an extremely satisfactory figure. When it is remembered that all the articles of food are of the highest quality, the economy practised will be realised.

PART III.

GENERAL SANITARY WORK.

NOTIFICATION OF BIRTHS ACT, 1907.

This Act has been in force since the 11th of February, 1908. Its main provisions are as follows :—

COPY OF SECTION 1. OF THE NOTIFICATION OF BIRTHS ACT, 1907.

SECTION 1.—The provisions of this Section shall have effect in the area of any local authority in which this Act is adopted by that authority in accordance with the provisions of this Act :—

- (1) In the case of every child born in an area in which this Act is adopted it shall be the duty of the father of the child, if he is actually residing in the house where the birth takes place at the time of its occurrence, and of any person in attendance upon the mother at the time of, or within six hours after the birth, to give notice in writing of the birth to the Medical Officer of Health of the District in which the child is born, in manner provided by this section.
- (2) Notice under this section shall be given by posting a prepaid letter or post card addressed to the Medical Officer of Health at his Office or Residence, giving the necessary information of the birth within thirty-six hours after the birth, or by delivering a written notice of the birth at the Office or Residence of the Medical Officer within the same time : and the Local Authority shall supply without charge addressed and stamped postcards containing the form of notice to any Medical Practitioner or Midwife residing or practising in their area, who applies for the same.

- (3) Any person who fails to give notice of a birth in accordance with this section shall be liable on summary conviction to a penalty not exceeding twenty shillings : Provided that a person shall not be liable to a penalty under this provision if he satisfies the court that he had reasonable grounds to believe that notice had been duly given by some other person.
- (4) The notification required to be made under this Act shall be in addition to and not in substitution for the requirements of any Act relating to the registration of births ; and any registrar of births and deaths whose sub-district or any part thereof is situate within any area in which this Act is adopted shall at all reasonable times have access to notices of births received by the Medical Officer of Health under this Act, or to any book in which those notices may be recorded, for the purpose of obtaining information concerning births which may have occurred in his sub-district.
- (5) This section shall apply to any child which has issued forth from its mother after the expiration of the twenty-eighth week of pregnancy, whether alive or dead.

Stated briefly, the object of the Act is to give the Sanitary Authority an opportunity of advising on the rearing of Infants in such cases as is deemed necessary and advisable, as soon after birth as is possible.

975 births occurred in Blackpool during 1911, and were registered under the Registration Acts within the specified period of six weeks. Of these, 831, or 85 per cent. were notified to me under the Notification of Births Act. The remaining 15 per cent. were not notified because of ignorance of the requirements of the Act, or deliberate negligence.

The reason given by some for the neglect of notification is that they do not desire any visitation or interference by an official of the Health Department, but I have stated in the previous Annual Reports which I have prepared that cases will only be visited with the approval of medical practitioners and parents. I think, therefore, that the fear of interference is unwarranted.

I lose no opportunity of urging upon all persons concerned a compliance with this Act, and failing a more ready response than I have yet received, I shall be forced to bring specific cases of non-compliance to the notice of the Health Committee.

The following two Tables will reveal in a clear manner the particulars of the births :—

COMPARATIVE TABLE OF BIRTHS REGISTERED
AND NOTIFIED.

	Registered under the Registration of Births Acts	Registered Births Notified to Medical Officer of Health under Notification of Births Act.
Doctor in attendance at Birth	412	295
Doctor and Midwife	190	182
Midwife	353	347
Other Persons	18	7
No Information.....	2	—
Totals	975	831

BIRTHS NOTIFIED TO THE MEDICAL OFFICER OF HEALTH
FROM 1ST JANUARY TO 31ST DECEMBER, 1911.

Notified by	Notification of Births	Notification of Still-Births
Doctor	260	26
Doctor & Midwife	34	6
Midwife	440	23
Others	94	3
Totals	828	58

The work has been carried out entirely by the Health Visitor, Miss Annie Heaton, under the direction of the Medical Officer of Health. Miss Heaton was granted three months' leave of absence for the three months June, July, and August, and her work was done by Miss Waring.

1,895 visits have been paid in connection with the subject of infant rearing, including primary and subsequent visits, and enquiries into still births. Advice has been given on the storage of food, and on the feeding and clothing of infants, and a special point has been made of urging upon mothers the importance of persevering with the breast milk, even if it has to be supplemented by cows' milk, suitably prepared. Suitable pamphlets and booklets embodying this advice, have also been left at most of the houses.

It is pleasing to note that many of the visits and re-visits have been paid by requests made personally or by letter.

A great advance has been made this year in the class of house visited, on the strength of complaints having been made (during the prevalence of summer diarrhœa) that the Health Visitor had not called before.

Great difficulty has been experienced in dealing with cases of illegitimate children. In many cases the mother is in service, and goes to Kirkham for confinement, and then, on return to Blackpool, any past address is given, with the result that the Health Visitor is unable to trace mother or child.

As is only to be expected in a population of the size of Blackpool, many cases are met with where the interests of the child are sacrificed to intemperance or other vice. I have good reasons for believing that the practice of artificial inducement of abortion or premature labour by the use of drugs or instruments is not uncommon, and in some cases even, women have actually informed the Health Visitor of their having indulged in this practice. Cases have also been met with where parents were supposed to be unable to provide nourishment for their children, but yet were able to provide themselves with a liberal supply of beer. I do not desire to give undue prominence to this aspect of the work of the Health Visitor, or to give any statistics which might be considered sensational or alarming, yet I desire the Health Committee to know that these conditions do exist, and that they are dealt with as far as is possible by the staff.

Over 100 cases have been relieved by the Ladies' Sick Poor Association at our request, and I have once more to express my appreciation of the valuable work done by

the visiting Ladies. I consider an institution such as this a most valuable one for the town, for until our Poor Laws are re-modelled there is bound to be great scope for the charitable relief of distress due to sickness. The ladies of the Committee have been most sympathetic and attentive to all our cases, and, on behalf of the Health Committee and myself, I tender them our heartfelt thanks.

It has been necessary to requisition the assistance of the Inspector of the N.S.P.C.C. in 6 cases, and the visits and attention paid by him have undoubtedly had a salutary effect in the conduct of the parents.

MIDWIVES' ACT, 1902.

Total on Register 1st January, 1911	30
No. who sent in Form VIII. of intention to practise	25
No. of new Midwives admitted to Roll during 1911.....	—
No. of Midwives who died during 1911	—
Changes of address reported to Central Mid- wives' Board	5
Notifications received from Midwives :—	
Sending for Medical Help	9
Still Births.....	29
Death of Child	—
Visits paid by the Medical Officer of Health or Health Visitor	103

Of the 30 Midwives on the roll on the 1st January, 1911, 19 are certified because they were in practice for one year prior to the passing of the Act ; 3 have the L.O.S. certificate ; 3 have the St. Mary's Hospital, Manchester, certificate ; 1 has a certificate from the Ladies' Charity Lying-in Hospital, Liverpool ; and 4 the C.M.B. certificate.

Four cases of puerperal fever occurred in the practice of Midwives during 1911. The Midwives were temporarily suspended until their bags, &c., were disinfected.

From and after the 1st April, 1910, no woman, unless a Certified Midwife under the Midwives' Act is allowed habitually and for gain to attend women in child-birth. Several of the monthly nurses have therefore been discontinued from practice unless they were working directly under the supervision of a medical man. It was anticipated that in many districts this would lead to a shortage of Midwives, but this has not proved to be the case in Blackpool. The fees charged by Midwives vary between 10s. 6d. and £2 2s., but the majority of them are under 15s.

One hundred and three Visits were paid by the Medical Officer of Health and the Health Visitor during 1911 in order to inspect bags and registers.

EDUCATION (ADMINISTRATIVE PROVISIONS) ACT, 1907.

The scheme of Medical Inspection of school children under the above Act is the same as for the previous year. The Medical Officer of Health is the School Medical Officer, and Dr. Dora E. L. Bunting has continued to act during the year as Assistant School Medical Officer, doing the actual examination of the children. Towards the close of the year the Education Committee decided to appoint a School Nurse for a period of one year.

A detailed report on the examination of children at the elementary schools will be prepared and submitted to the Education Committee.

The following structural and other alterations, having an influence on their sanitary condition, were carried out during the year 1911 at the schools mentioned.

CHRIST CHURCH SCHOOL.—

Yard drains re-laid. Yard surface partly re-formed. Windows re-glazed. Roof ventilators repaired.

VICTORIA SCHOOL.—

Playgrounds re-surfaced. Floors of w.c's and boys' urinal repaired.

THAMES ROAD SCHOOL.—

Rainwater down-pipe unblocked. Yard surface repaired.

ST. CUTHBERT'S SCHOOL.—

W.C. drain unblocked.

ST. JOHN'S SCHOOL.—

Two new lavatory basins fixed.

TALBOT ROAD SCHOOL.—

Drains unblocked. W.C's ventilated

WATERLOO ROAD SCHOOL.—

New Urinal slabs. Asphalt repaired.

In addition, the drains of all the schools were flushed and disinfected during the summer holidays.

FACTORY AND WORKSHOP ACT, 1901.

In accordance with the provisions of Section 132 of this Act, every Medical Officer of Health is required in his Annual Report to “report specifically on the administration of this Act in workshops and work-places, and he shall send a copy of his annual report, or as much of it as deals with this subject, to the Secretary of State.”

The administration of the Act as regards factories comes more under the supervision of the Government Factory Inspector, which accounts for the fact that only 16 visits were paid to them by our Inspectors during the year. If the Government Inspector detects any sanitary defects on his visits, he reports them to the Medical Officer of Health, and then our Inspectors take the matter up.

There are 178 Factories in the Borough, and through the courtesy of Mr. Kellett, the Inspector of Factories for this district, I am able to give the following classification :—

BUILDING AND FURNISHING TRADES :

Joinery, Sawmill, and Cabinet Works	26
Stone Works and Mortar Mills	6
Brick Works	4
	—36

Coachbuilding and Wheel- wrights	6
---	---

PREPARATION OF FOOD, ETC. :

Bakehouses	18
Sausage Works	6
Sugar Boiling	4
Ice Cream Making	2
Dairies	1
Aerated Water Manufac- turing, Beer Bottling, and Brewing	19
Other Provisions	1
	—51

WEARING APPAREL :

Dress, Millinery, and Tailoring	1
Bootmaking & Repairing	11
	—12

LETTERPRESS PRINTING :

Letterpress Printing and Bookbinding	15
	—15

120

Forward 120 ENGINEERING :

Engineering Works and Smithies	8
Cycle and Motor Car Works	6
Tool Making	1
Rolling Stock	1
	—16

LIGHTING :

Electricity Generating	9
Gas Works	1
	—10

LAUNDRIES :

Laundries and Carpet- Beating Works	11
Bedding, &c., Cleaning Works	1
	—12

MISCELLANEOUS :

Art Needlework	1
Electro-Plating	2
Photograph Printing ...	—
Toy Making	1
Wire Mattresses	2
Picture Frame Making	1
Firewood Cutting	4
Cigar Making	2
Provender & Corn Mills	6
Watch Repairs	1
	—20

Total..... 178

As regards Workshops, there are 514 in all registered in the Borough, classified as follows :—

CLOTHING, &c. :		Forward	443
Milliners	27	CONVEYANCES, &c. :	
Tailors	41	Wheelwrights & Coach	
*Dress	65	Builders	2
Boots and Clogs	74	Saddlery	5
Underclothing and Baby		Black and Whitesmiths...	12
Linen	2	Cycle Repairs	6
Hosiery	2		—25
	—211	JEWELLERY, &c. :	
FOOD AND DRINK :		Watch Repairing and	
Bakers and Confectioners	170	Jewellery	6
Sugar Boiling	2	Photo Mounting and	
Beer Bottling	2	Picture Frame Making	16
	—174		—22
BUILDING TRADES, &c. :		OTHER TRADES :	
Plumbing and Painting...	21	Hand Laundries	4
Joiners	17	Cigar Manufacturers	2
	—38	Brush Manufacturer	1
FURNITURE :		Printers and Bookbinders	8
Cabinet Making and Up-		Electrical Appliances ...	1
holstery	19	Basket Manufacturer ...	1
Wire Mattresses	1	Monumental Mason	1
	—20	Venetian Blind Manufac-	
		turer	1
		Motor Garage	1
		Hardware Repairing	1
		Paper Sorting	1
		Furrier	1
		Firewood	1
			—24
	443		514

*NOTE.—When Millinery and Dress are made on the same premises, they are classified under "Dress."

There were crossed off the Register during the year :

Milliners	8
Tailor	11
Dressmaking	37
Boots and Clogs	19
Underclothing and Baby Linen	2
Hosiery	1
Sugar Boiling	3
Plucking Place	1
Pickle Works.....	1
Plumbing and Painting	2
Joiners	3
Cabinet Making and Upholstering	7
French Polishers	1
Black and Whitesmith	1
Gunsmith	1
Photo Mounting and Picture Framing.....	3
Hand Laundries	2
Cigar Manufacturer	1

The following new Workshops were added :

Milliners	4
Tailors.....	12
Dressmaking	9
Boots and Clogs	9
Hosiery	1
Bakers and Confectioners	21
Plumbing and Painting	4
Joiners	3
Cabinet Making and Upholstering	5
Cycle Repairers.....	2
Photo Mounting and Picture Framing	5
Hand Laundries	1
Cigar Manufacturers	1
Printers and Bookbinders	5
Paper Sorting	1
Furrier	1
Hardware Repairer	1
Firewood	1

I now submit in the official form required by the Home Office, the following statistical report of the proceedings which have been taken in connection with the supervision of Factories, Workshops, and Workplaces of the Borough in regard to those matters placed by the Act under the control of the local Sanitary Authority.

1.—INSPECTION OF FACTORIES, WORKSHOPS AND
WORKPLACES.

Including Inspections made by Sanitary Inspectors or Inspectors of Nuisances.

PREMISES	Number of		
	Inspections	Written Notices	Prosecutions
FACTORIES (Including Factory Laundries)	16	—	—
WORKSHOPS (Including Workshop Laundries)	714	27	—
WORKPLACES (Other than Outworkers' Premises included in Part 3 of this Report)	290	—	—
TOTAL	1,020	27	—

2.—DEFECTS FOUND IN FACTORIES, WORKSHOPS AND WORKPLACES.

PARTICULARS	Number of Defects			Number of Prosecutions.
	Found.	Remedied.	Referred to H.M. Inspector.	
NUISANCES UNDER THE PUBLIC HEALTH ACTS :—				
Want of Cleanliness	53	44	—	—
Want of Ventilation	5	5	—	—
Overcrowding	1	—	—	—
Want of drainage of floors	—	—	—	—
Other nuisances	39	34	—	—
Sanitary accommodation	insufficient	8	6	—
	unsuitable or defective	2	2	—
	not separate for sexes	—	1	—
OFFENCES UNDER THE FACTORY & WORKSHOP ACT:—				
Illegal occupation of underground bakehouse (s. 101)	—	—	—	—
Breach of special sanitary requirements for bake-houses (ss. 97 to 100)	16	14	—	—
Other offences	—	—	—	—
(Excluding offences relating to outwork which are included in Part 3 of this Report)				
TOTAL	124	103	—	—

NATURE OF WORK.	OUTWORKERS' LISTS, SECTION 107.										OUTWORK IN UNWHOLESOME PREMISES, SECTION 108.			OUTWORK IN INFECTED PREMISES, SECTIONS 109, 110.		
	Lists received from Employers.						Prosecutions.				In- stances.	Notices served	Prosecu- tions.	In- stances.	Orders made (s. 110).	Prosecu- tions (sections 109, 110)
	Twice in the year.			Once in the year.			Failing to keep or permit in- specion of lists	Failing to send lists.	(10)							
	Lists. (2)	Con- trac- tors. (3)	Work men. (4)	Lists. (5)	Con- trac- tors. (6)	Work men (7)				(8)						
							(1)	(9)	(11)		(12)	(13)	(14)	(15)	(16)	
Wearing Apparel :— (1) Making, etc. (2) Cleaning and washing Household linen Lace, lace curtains and nets Curtains and furniture hangings Furniture and upholstery Electro-plate File making Brass and brass articles Fur pulling Cables and chains Anchors and grapnels Cart gear Locks, latches and keys Umbrellas, etc. Artificial flowers Nets, other than wire nets Tents Sacks Racquet and tennis balls Paper bags and boxes Brush making Pea picking Feather sorting Carding, &c., of buttons, &c. Stuffed toys Basket making	52 — — — — — — — — — — — 2 4 — 															

Inspections of Outworkers' premises ... 99.

Addresses of Outworkers received from other authorities ... 5
do. forwarded to other authorities ... 23

4.—REGISTERED WORKSHOPS.

Workshops on the Register (s. 131) at the end of the year.		Number
Important classes of workshops, such as workshop bakehouses, may be enumerated here.	Making of wearing apparel	211
	Workshop Bakehouses	170
	Preparation of other Foods	4
	Building Trades.....	38
	Furniture Making, etc.	20
	Conveyances	25
	Other Trades	46
Total number of Workshops on Register.....		514

5.—OTHER MATTERS.

CLASS	Number
Matters notified to H.M. Inspector of Factories :—	
Failure to affix Abstract of the Factory & Workshop Act (s. 133)	—
Action taken in matters referred by H.M. Inspector as remediable under the Public Health Acts, but not under the Factory and Workshop Act (s. 5)	Notified by H.M. Inspector 22
	Reports (of action taken) sent to H.M. Inspector 17
Other.....	—
Underground Bakehouses (s. 101) :—	
Certificates granted during the year	—
In use at the end of the year	6

It will be observed from the preceding Tables that 1,020 visits were paid by the Inspectors during the year, and the sanitary conditions have been kept under close supervision. This total includes 290 visits to workplaces, but not the visits to Slaughter-houses.

124 defects were detected, and of these 106 were remedied, leaving 18 still requiring attention at the commencement of 1912.

Circular letters were sent out at the beginning of February and August, asking for lists of Outworkers. The premises of the outworkers were visited twice during the year, and were found in a satisfactory condition.

SHOP HOURS ACTS, 1892, 1893, AND 1895.

These Acts require that no young person (i.e., a person under the age of 18 years) shall lawfully be employed in a shop for a longer period than 74 hours, including meal times, in any one week, and that a notice to this effect must be exhibited in a conspicuous place in any shop where a young person is employed. The employer is liable to a fine not exceeding £1 for each young person employed in contravention of these Acts, and to a fine not exceeding 40s. for failure to exhibit the notice.

The working of these Acts is in Blackpool entrusted to the Department of the Medical Officer of Health.

One hundred and ninety-four visits were paid to shops, and in two instances there was a failure to exhibit the notice. A warning letter was sent in each case.

EMPLOYMENT OF CHILDREN ACT, 1903.

This Act requires that :

A child shall not be employed between the hours of nine in the evening and six in the morning ;

A child under the age of eleven years shall not be employed in street trading ;

No child who is employed half-time under the Factory and Workshop Act, 1901, shall be employed in any other occupation ;

A child shall not be employed to lift, carry, or move anything so heavy as to be likely to cause injury to the child ;

A child shall not be employed in any occupation likely to be injurious to his life, limb, health, or education, regard being had to his physical condition.

If the local authority send to the employer of any child a certificate signed by a registered medical practitioner that the lifting, carrying, or moving of any specified weight is likely to cause injury to the child, or that any specified occupation is likely to be injurious to the life, limb, health, or education of the child, the certificate shall be admissible as evidence in any subsequent proceedings against the employer in respect of the employment of the child, a child being (unless otherwise mentioned) a person under the age of 14 years.

Twelve visits were paid under this Act, and in two instances contraventions were found. Warning letters were sent. In one instance a child was found working at 10 p.m., and in the other case at 9.50 p.m.

THE BLACKPOOL CLOSING ORDER, 1908.

BARBERS' AND HAIRDRESSERS' SHOPS.

This Order, made under powers granted by the Shop Hours Act, 1904, states that from the 1st day of November, to the 30th day of April, both days inclusive, Barbers' and Hairdressers' Shops shall close at the following hours :—

Mondays and Thursdays	8 p.m.
Tuesdays and Fridays	8.30 p.m.
Wednesdays	1 p.m.
Saturdays	10 p.m.

The following dates are exempted :—December 18th, to 24th, both days inclusive, and from Wednesday previous to Easter Day to the Wednesday following Easter Day, both days inclusive.

No complaint of a breach of this Order was received during the year.

SUPERVISION OF FOOD SUPPLIES.

This has been carried out during the year by Inspector Newby, under the direction and supervision of the Medical Officer of Health.

The following food places exist in the Borough :—

	1910		1911
	<hr/>		<hr/>
Butchers' Shops	110	...	116
Frozen Meat Shops	30	...	26
Fish and Chip Shops	94	...	96
Fish Dealers (mostly also selling fruit and Game)	46	...	40
Provision Shops (mostly also selling Fruit) ...	244	...	258
Provision Shops (selling also Butcher's Meat)	25	...	26
Fruit Shops	74	...	72
Restaurants where Food is cooked	60	...	60
Tea Rooms	15	...	15
Oyster Shops	11	...	15
Confectioners' and Sweet Shops	222	...	238
Fruit Shops (selling also Butcher's Meat) ...	1	...	3
	<hr/>	...	<hr/>
	<u>932</u>	...	<u>965</u>

It is difficult to keep an accurate list of provision dealers for the entire year, as during the summer the list is so greatly augmented by meat stalls, fish carts, temporary tenants, etc., but it is quite evident that the list is increasing gradually year by year, in order to cope with the increasing population.

No effort has been spared to maintain the efficiency of the Inspection of the Food Supplies during the year, and

the co-operation of the food vendors in the town has rendered this work a great deal more harmonious than it otherwise would have been.

The following list of visits which have been paid will indicate the extent of the work of the Food Inspector :—

	1911
Milkshops and Dairies	244
Cowsheds in the Borough	143
Cowsheds out of the Borough	—
Ice Cream Stalls	49
Ice Cream Workshops	167
Public Slaughter-houses	268
Other Slaughter-houses in the Borough	473
Other Slaughter-houses out of the Borough.....	17
Butchers' Shops	1,592
Other Shops	1,780
Restaurant Kitchens	123
	<hr/>
	4,856
	<hr/>

In all cases where vendors of food have any doubt as to the quality of any article they are invited to send to the Health Office, when the Medical Officer of Health or Food Inspector will at once call and pass an opinion on the article.

During the year the following articles were destroyed as unfit for food (not including meat from the Public Slaughter-Houses) :—

- 150 lbs. of Halibut.
- 136 lbs. of Plaice.
- 105 lbs. Loin of Pork.
- 1 Tin Condensed Milk.
- 8 Baskets of Mushrooms.
- 1 Dutch Calf.
- 24 lbs. Raw Tripe.
- 4 Sets Sausage Skins.
- 3 Cases Australian Pears.
- 16 Cases Rotterdam Lettuces.
- 12 Chickens.
- 128 lbs. Frozen Tripe.
- 7 Quarts Ice Cream.
- 189 lbs. Cherries.
- 42 Ducks.
- 920 lbs. Pears.
- 4 Boxes Kippers.
- 14 lbs. Greengages.
- 37 Crabs.
- 48 Rabbits.

It was not necessary to obtain a Magistrate's Order for destruction, or institute legal proceedings in respect of any of the above articles.

SLAUGHTER-HOUSES AND THE INSPECTION OF MEAT.

At the commencement of the year there were in the Borough the Corporation abattoirs, and two other private Slaughter-houses.

The system of letting private premises at the abattoirs greatly facilitates the inspection of meat, and also obviates the occurrence of the nuisance inseparably attached to such buildings when scattered over the town.

Eight of the private premises were let to the following : Mr. J. Cocker, Mr. T. Holroyd, Messrs. Holt and Hull, Messrs. Valiant and Rainford, Messrs. Garsden and R. Hull, Mr. H. O. Laycock, the Argenta Meat Co., and the Co-operative Society. Other premises were let for hide, skin, and fat warehouses, for gut scraping, for tripe boiling, and for blood drying.

The public Slaughter-houses at the abattoirs were regularly used by a considerable number of butchers during the year.

The following animals were slaughtered at the abattoirs :—

	1910		1911
	<hr/>		<hr/>
Cows	130	...	123
Heifers	2,318	...	2,154
Bullocks	547	...	652
Bulls	21	...	28
Calves	878	...	851
Sheep	38,917	...	40,947
Pigs	1,266	...	1,275
	<hr/>		<hr/>
	44,077	...	46,030
	<hr/>		<hr/>

These figures are in excess of those for 1910.

There were killed at the private Slaughter-houses (other than the abattoirs) in and out of the Borough, and brought into the Borough for sale :

	1911
Heifers	832
Bullocks	156
Calves	996
Sheep	11,774
Pigs	233

The following were surrendered and destroyed during 1911, from the Corporation abattoirs :—

(A) Tuberculosis :

1 Cow (498 lbs.)
 2 Heifers (834 lbs.)
 7 Pigs (973 lbs.)
 Viscera of 6 Heifers.
 Viscera of 2 Cows.
 Viscera of 3 Bullocks.

(B) Found Dead in Field :

3 Sheep.
 10 Lambs.

(C) Inflammation :

1 Calf (67 lbs.)
 1 do. (50 lbs.)

(D) Jaundice :

1 Pig (105 lbs.)

The following were surrendered and destroyed from other private Slaughter-houses :—

(1) Within the Borough : Nil.

(2) Outside the Borough :

Viscera of Heifer. Slightly Tuberculous.

Viscera of one Bullock.

THE MILK SUPPLY.

All efforts to maintain the wholesomeness of the Milk Supply have been made during the year under review. In the first place, the milk of healthy cows only should be used for human consumption ; in the second place, the cows and cowsheds should be kept scrupulously clean ; and in the third place, the process of milking and the distribution of milk should be carried out in such a manner as to prevent the introduction of any extraneous matter into the milk. As regards the first two, these have been well supervised in the cowsheds within the Borough. It must, however, be remembered that a large portion of our milk comes from farms without the Borough, over which we have no control, or power of inspection—in fact, the taking of samples of such milk, under the Sale of Food and Drugs Act, is the only means we have of exercising any supervision over it. My remedy for such an anomalous state of affairs is that a Sanitary District receiving milk from a farm within another district should be empowered to require from the vendor of the milk a certificate from the Sanitary Authority where he resides as to the healthiness of his cows, &c.

I think I can state that there has been a little improvement in the cleanliness of the milk during the year. I would, however, urge upon all the vendors the importance

of carrying out all precautions to avoid the introduction of sediment into the milk. These precautions should include the grooming of cows, cleansing of the udders prior to milking, and the cleansing of hands, and wearing of clean overalls by the milkers.

The following is a list of the Milksellers in the Borough :

Dairies selling by retail	11
Provision dealers selling by retail	64
Butchers ,, ,,	8
Persons meeting farmers' carts and delivering milk direct, not taking it home	17
Tea Rooms and Sweets Shops selling in glasses as refreshments when asked for	81
Dining Rooms selling milk in glasses when asked for...	11
Selling sterilised milk	2
	<hr/>
	194

This number is an increase of 18 on the 1910 figure.

No. of Cowsheds in the Borough during 1911, the occupiers of which sold Milk during the year	42
Farmers outside the Borough bringing Milk into the Borough	163
Ice Cream Dealers	148

During 1911, as seen on page 95, Mr. Newby paid in all 143 visits to cowsheds within the Borough, 244 to milkshops and dairies, 216 to ice-cream stalls and workplaces, and 123 to restaurant kitchens.

Fifty-one milk dealers, and 53 ice-cream dealers applied for registration during the year.

Forty-two persons have been cautioned for selling milk or ice-cream without being registered.

SALE OF FOOD AND DRUGS ACTS.

Mr. Thomas Sanderson, the Chief Sanitary Inspector, is the Official Sampling Officer under these Acts. One hundred and ninety two samples were taken during 1911, and were composed of the following :—

INFORMAL SAMPLES.			NATURE OF SAMPLE.	FORMAL SAMPLES.		
NUMBER.				NUMBER.		
Taken.	Not Genu- ine.	Reference Numbers.		Taken.	Not Genu- ine.	Reference Numbers.
—	—	—	Baking Powder	1	—	—
12	—	—	Beer	—	—	—
—	—	—	Brawn	1	—	—
6	—	—	Butter	28	—	—
—	—	—	Camphorated Oil	1	—	—
—	—	—	Candied Peel	1	—	—
—	—	—	Cheese	1	—	—
12	12	1100, 1102, 1103, 1104, 1105, 1107, 1108, 1109, 1110, 1111, 1112, 1113,	Cider	—	—	—
1	—	—	Cider (Devonshire)	—	—	—
1	1	1106	Cider (Fruit)	—	—	—
4	—	—	Coffee	16	—	—
—	—	—	Cornflour	1	—	—
—	—	—	Cream	3	1	1077
—	—	—	Cream of Tartar	1	—	—
1	—	—	Eucalyptus Oil	—	—	—
1	—	—	Flour	—	—	—
—	—	—	Gin	1	—	—
—	—	—	Ham (Boiled)	1	—	—
1	—	—	Ipecacuanha Wine	—	—	—
—	—	—	Jam (Strawberry)	1	—	—
—	—	—	Lard	6	—	—
1	—	—	Liquorice Powder	—	—	—
—	—	—	Margarine	1	—	—
—	—	—	Mustard	4	—	—
1	—	—	Milk	54	8	987, 1022, 1024, 1025, 1026, 1027, 1038, 1067
—	—	—	Olive Oil	1	—	—
1	—	—	Oxide of Zinc Powder ..	—	—	—
—	—	—	Pepper (White)	7	—	—
1	—	—	Quinine, Tincture of	—	—	—
—	—	—	Rice	1	—	—
1	—	—	Sal Volatile, Spirits of ..	—	—	—
—	—	—	Shrimps	1	—	—
—	—	—	Shrimps (Picked).....	2	1	1019
—	—	—	Shrimps (Potted).....	2	1	1018
—	—	—	Sweets (Liquorice)	1	—	—
—	—	—	Sweets (Treacle & Butter)	1	—	—
—	—	—	Sweets (Fondant Chips)	1	—	—
—	—	—	Sugar (Demerara)	1	1	1161
—	—	—	Tapioca	1	—	—
—	—	—	Vinegar (Malt)	2	—	—
4	—	—	Whiskey (Scotch)	1	—	—
48	13			144	12	

The following are the observations on Samples certified as not genuine :—

MILK.

SAMPLE 987.—Fat 3.3 per cent. ; Solids, not fat, 8.25 per cent. ; Total Solids, 11.55 per cent. Certified “ Slightly watered.” The vendor was interviewed, but he was not able to give any reason for the deficiency. No further action was taken.

SAMPLE 1022.—Fat, 2.85 per cent. ; Solids, not fat, 9.05 per cent. ; Total Solids, 11.9 per cent. Certified “ Slightly deficient in cream.” This was a sample taken on the 9th June, following upon Sample No. 878, taken on the 24th June, 1910, and Samples 879, 880, and 881, taken on the farm by the Sampling Inspector. The samples of 1910 contained 2.24 per cent., 2.97 per cent., 2.80 per cent., and 2.65 per cent. of fats respectively. On receipt of the certificate for Sample 1022, the farm was visited, but nothing of any special importance was detected. The stock was good, pasture good, and provender given twice daily. It was a sample of morning milk, and the cows were milked at 1 p.m. and 5 a.m. No further action was taken.

SAMPLE 1024.—Fat, 2.62 per cent. ; Solids, not fat, 9.19 per cent. ; Total Solids, 11.81 per cent. Certified “ Milk deprived of 12 per cent. of its cream.” This sample followed upon a sample previously taken, which gave an analysis of 2.57 per cent fat. The farm was at this time visited, and samples of morning milk taken there, and the results of analysis were 2.67 per cent. and 3 per cent. fats. Afternoon milk from the same farm gave an analysis of

4.2 per cent, and 4.03 per cent. fats. On receipt of certificate for Sample No. 1024 the farm was again visited. The stock was young, and in good condition, and the pasture was good. Milking took place at 4.50 a.m. and 1 p.m., and the sample was one of morning milk. The farm is about six miles from Blackpool. No further action was taken.

SAMPLE 1025.—Fat, 2.69 per cent. ; Solids, not fat, 8.68 per cent. ; Total Solids, 11.37 per cent. Certified “ Deprived of 10 per cent. of its cream.” One cow was kept at the farm, but other milk was purchased by the vendor. The cow was not in good condition, and was milked about 6 a.m. and 1 p.m. The farm was visited. The cow was provendered twice daily. No further action was taken, but samples from this vendor will be submitted for analysis at a later period.

SAMPLE 1026.—Fat, 2.85 per cent. ; Solids, not fat, 9.10 per cent. : Total Solids, 11.95 per cent. Certified “ Slightly deficient in cream.” The farm was visited, and it was found that about 48 cows were kept, and were milked at 4.45 a.m. and 1 p.m. The sample was one of morning milk. The stock was in good condition, and on good pasture. Crushed oats and Indian meal were given twice daily. No further action was taken.

SAMPLE 1027.—Fat, 2.72 per cent. ; Solids, not fat, 8.79 per cent. ; Total Solids, 11.51 per cent. Certified “ Deprived of 9 per cent. of its cream.” This was a sample of dairy milk. The dairy was visited, and the information given was that the milk had not been in the dairy, but was transhipped direct from the farmer's to the dairy float.

The farm was visited, and it was found that there were 15 cows, being milked at 5.30 a.m. and 2 p.m. They were grass fed, and the pasture was in good condition. The stock also was in good condition. No further action was taken.

SAMPLE 1038.—Fat, 3.12 per cent. ; Solids, not fat, 7.75 per cent. ; Total Solids, 10.87 per cent. Certified to “ contain 8 per cent. of added water.” Legal proceedings were instituted, which resulted in the infliction of a fine of 40s. and £1 17s. costs.

SAMPLE 1067.—Fat, 2.9 per cent. ; Solids, not fat, 8.85 per cent. ; Total Solids, 11.75 per cent. Certified “ Slightly deficient in cream,” Owing to domestic trouble at the farm, no further action was taken but samples will be submitted later in the year.

I attribute the deficiency in fats in the above cases to the unequal intervals between the morning and evening milking.

CREAM.

SAMPLE 1077.—Containing 0.3 per cent. Boracic Acid. The label on this sample stated that it contained a “ small percentage of Boron Preservative.” No action was taken.

POTTED SHRIMPS.

SAMPLE 1018.—Certified to contain 0.89 per cent. Boracic Acid (62 grains per pound.)

PICKED SHRIMPS.

SAMPLE 1019.—Certified to contain 0.7 per cent. Boracic Acid (49 grains per pound.)

Owing to the fact that a recent prosecution for excess of Boracic Acid had not been successful, it was thought advisable not to institute legal proceedings in the above two cases.

DEMERARA SUGAR.

No. 1161 certified to consist of refined sugar, coloured with syrup. A warning letter was sent.

CIDER.

SAMPLES Nos. 1100, 1102, 1103, 1104, 1105, 1107, 1108, 1109, 1110, 1111, 1112, 1113.—The Sampling Inspector was visited by an Official of the Board of Agriculture, and was informed that complaints had been received that certain articles were sold in Blackpool under the name of "Cider." Samples were taken by him, and the Analyst reported as follows:—"These Samples all consist of coloured, flavoured, and aerated sugar solutions. They are not fermented, nor are they prepared from apples."

This report of the Analyst was considered at length by a special Sub-Committee appointed by the Health Committee, and the following report of the Sampling Inspector was submitted to them:—

REPORT ON AN AERATED MINERAL WATER WHICH HAS BEEN SOLD EXTENSIVELY IN BLACKPOOL AND DISTRICT AS "CIDER."

"Cider" has been manufactured in Blackpool from Tartaric Acid, Saccharine, Pineapple Juice, &c., without the addition of Apple Juice for the past 40 years. The liquid is forced by air pressure into glass bottles, each bottle containing one gill, and classed as an Aerated Mineral Water.

All mineral water manufacturers have made and sold this article, and it is a drink extensively used by children during the summer months. It is sold by grocers, stallholders, a good many of the paper or small stationers' shops, and all the licensed premises in the town.

It is not labelled, each bottle having the manufacturer's name only cast on the glass during the manufacture of the same.

Soda Water, Lemonade, Hop Ale, Dandelion Stout, and many other classes of Mineral Waters, as manufactured by the makers in the district, are all labelled.

"Cider" is generally sold by the manufacturer in boxes specially constructed to hold 24 bottles, at a cost of 1s. 6d., box and bottles to be returned to the manufacturer.

Lorry loads of various classes of Mineral Waters, including Cider, are sent out from the works in charge of a driver, who is paid a weekly wage and commission on all he sells over a certain number.

Anyone unknown who may ask the lorry drivers for a two dozen box of Cider, would be supplied with the "Cider" similar to that which I have had analysed, although inhabitants of Blackpool and this district would know that they were only getting aerated water, and not genuine Cider.

The retail price of this "Cider" to the public is:—Licensed premises, 2d. per bottle; grocers' shops, stalls, small stationers shops, 1d. per bottle, when consumed on the premises, and 1½d. when the bottle is taken out; ½d. per bottle being allowed when it is returned.

Cider—that is pure apple Cider—is only sold at a few of the better-class hotels in the town, and 3d. per gill bottle is obtained.

The samples which I have had submitted to the Analyst were taken informally at the manufacturers' premises, when the bottles were ready for distribution to the customers.

THOMAS SANDERSON,

Chief Sanitary Inspector.

10th November, 1911.

On the instructions of the Health Committee, I sent a copy of the following letter to each of the manufacturers of Cider within the Borough :—

28th December, 1911.

DEAR SIR,—

Representations have been made by Inspectors of the Board of Agriculture that certain aerated mineral waters have been sold extensively in Blackpool under the term “Cider.”

Several samples have been submitted to the Public Analyst, and he has reported that they were not samples of genuine “Cider.”

The matter has been reported to the Health Committee, and I have been instructed to communicate with persons interested, and draw their attention to the adverse report of the Analyst.

“Cider” is not an accurate description of the articles referred to above, and the sale of such articles as “Cider” constitutes a breach of the Sale of Food and Drugs Acts.

The Committee hope that the warning and information contained in this letter will be duly observed by all persons interested, and that in future only genuine Cider shall be sold as “Cider.”

Official samples will be taken in due course, and if reported upon adversely by the Public Analyst, legal proceedings under the Sale of Food and Drugs Acts will be instituted.

I remain,

Yours truly,

E. W. REES JONES,

Medical Officer of Health

Two hundred and fifty copies of this letter were also supplied to the Secretary of the Grocers' Association, for distribution amongst members.

FRUIT CIDER.—SAMPLE 1106, labelled “ Non-Alcoholic Fruit Cider, containing pure apple juice (aerated) ; none better.” The Analyst reported, “ This is an aerated solution of sugar and tartaric acid, containing possibly some 15 per cent. of apple juice. This sample differs distinctly from the twelve other non-alcoholic samples, and for the purposes of the Sale of Food and Drugs Acts, would probably be protected by the label.”

The samples of Beer were taken from each of the different brews which are forwarded into Blackpool, and all were found genuine.

With regard to the Drugs, one sample of Ammoniated Tincture of Quinine was certified to contain an excess of Quinine.

FERTILISERS AND FEEDING STUFFS ACT, 1896.

Mr. Thomas Sanderson, the Chief Sanitary Inspector, is the official Sampling Officer under this Act, but no applications were received by him during the year to have samples analysed.

INSPECTION OF NEW HOUSES.

The procedure adopted with regard to new houses remains as in previous years, viz., the Borough Surveyor notifies me of the completion of the building. The houses are then examined by my Department, and reports thereon made and sent to the Borough Surveyor. 467 new houses were examined during the year, and in all of them the sites were concreted. In 84 cases the drains were unsatisfactory on the first test, and it was necessary that some alteration should be made to them,

In 13 cases the closets were of unsatisfactory construction, the defect in the majority of cases being an insufficient area of water in the closet pan. In the tabulated statement on page 124, it states that 78 new houses were without ash receptacles, but this is due to the fact that in these cases the landlords had delayed providing them until the tenants actually came into occupation

STORAGE OF HOUSEHOLD REFUSE.

This department of the work has received special care as the importance of cleanly surroundings in the maintenance of health cannot be over-rated.

The large ashpits are gradually disappearing and being replaced by galvanised ashbins with tight covers. 1,766 visits have been paid for the purpose of inspecting ash receptacles. In 412 instances the receptacles were satisfactory, while in 467 instances they were unsatisfactory. It was necessary to issue 460 Preliminary and 165 Council notices to replace unsatisfactory galvanised iron bins.

FORMATION, PAVING, &c., OF STREETS.

The Borough Surveyor has kindly supplied me with the following list of streets made during the year 1911 :—

18 FRONT STREETS.

Central Avenue.
 Lune Grove (Part of).
 Avenham Grove.
 Cross Street (Part of).
 Lewtas Street (Part of).
 Wyre Grove (Part of).
 Leven's Grove (Part of).

Bela Grove (Part of).
 Catshaw Street.
 Saville Road, N. End (Part of).
 Kensington Road (Part of).
 Oxford Avenue.
 Hornby Road East.
 Brooklyn Avenue.
 Onslow Road.
 Mere Road.
 Olive Grove.
 Portland Road.

27 BACK STREETS.

Behind Nos. 38 to 72, St. Helier's Road.
 Back Bloomfield Road.
 Behind N. side of Dean Street.
 Between Exchange Street and Avenham Grove.
 Behind Nos. 1 to 9, Avenham Grove.
 ,, 161 to 165, Church Street.
 ,, N. side Cross Street.
 Between Cross Street and Lewtas Street.
 ,, Lewtas Street and Cocker Street.
 Behind N. side Willshaw Road.
 , N. side Warbreck Hill Road.
 ,, N. side King Edward Avenue.
 Between Hawthorn Road and Handsworth Road.
 Behind E. side Oxford Avenue.
 Between Nos. 30 to 32, Oxford Avenue.
 Back Street on West side of Oxford Avenue.
 ,, ,, Sherbourne Road.
 ,, ,, Grantham Road.
 Behind South side of Wood Street.
 ,, North ,, ,, ,,
 Between Nos. 46 and 48, Wood Street.
 Behind S. side of Portland Road.
 Between Nos. 18 and 20, Portland Road.
 Behind N. side of Portland Road.
 On the E. side of No. 13, Portland Road.
 Between Talbot Road and Queen Street.
 Behind Newton Drive from London Road to Dutton Road.

2 PASSAGES.

North side of Rawcliffe Street.

Between Hill Street and Percy Street.

OFFENSIVE TRADES.

The following exist in the Borough :—

Blood Drier—At Public Slaughter-house	.....	1
Tripe Boilers	Do.	2
Gut Scrapers	Do.	1
Hide, Skin and Fat Depot.	Do.	2
Rag and Bone Depots in the Borough	.....	3

It is very satisfactory to note that all the Offensive Trades, with the exception of the Rag and Bone depots, are at the abattoirs, where any of the effluvia emitted from them are not observed by any large body of people. They are also under daily observation by the caretaker of the abattoirs and the Meat Inspector. Considerable difficulty has been experienced in rendering the Blood-drying premises satisfactory, and unless more success is attained in this direction, I shall be obliged to recommend the Health Committee to terminate the tenancy of the occupier.

COMMON LODGING-HOUSES.

Under the Blackpool Improvement Act, 1901, sec. 47, the three Common Lodging-houses previously existing were

re-registered. These houses, with their accommodation, are as follows :—

Eden Street	.....160 adults and 1 child
Seed Street	..... 56 adults and 1 child
Gavan Street	148 adults and 22 married couples, or 217 adults and 1 child.

949 visits of inspection were paid, and it was found on the whole that the Lodging-houses were kept in a cleanly condition, and managed satisfactorily.

SMOKE NUISANCES.

Twenty-six full half-hour observations have been made and in one case the limit of $2\frac{1}{2}$ minutes black smoke in the half-hour was exceeded, and in five instances warning letters to offenders have been issued on the instructions of the Health Committee. I cannot impress too strongly upon all the householders and others in Blackpool the importance of reducing atmospheric impurities to a minimum. One of the chief inducements to visitors to come to Blackpool, and to other persons to reside here permanently, is the uncontaminated atmosphere, and in this respect it is advantageous to the town to be somewhat devoid of industries. Many medical men from various parts of the country have informed me that they consider the purity of our atmosphere a very important consideration in recommending convalescent patients to come here.

SANDS INSPECTIONS.

The Sands and Foreshore have been kept well under observation during the year, 257 visits having been paid.

I have to report a very marked improvement in the condition of the sands opposite Manchester Square. The screening apparatus is now in full operation, and has proved very satisfactory, in so far as its effect on cleansing the sands has been observed by Inspectors of my department.

The sands were visited on 250 days during the year, and on 233 they were found perfectly clean. Thus on 17 occasions there was evidence of sewage pollution. Eleven of these have reference to the sands in the neighbourhood of the North Shore outlet. The screening apparatus in connection with the main outlet having proved so satisfactory a similar apparatus is now being attached to the north outlet. The outlet pipe is also being continued 200 yards seawards, so that the extremity will be under water at all states of the tide. I feel confident that as soon as this work is completed, all occasion for dissatisfaction at the condition of the sands along the whole westerly stretch of the Borough boundary will be obviated.

BASEMENT DWELLINGS.

During the year 1910, I made a detailed report on the above subject, and presented it to the Health Committee. This was reproduced in my 1910 Annual Report, and I suggested that the basement dwellings should be kept under rigid supervision. This was approved by the Health Committee, and during 1911, 244 inspections were made. I think I can safely say that there has been a marked improvement in their condition, and in the large majority of cases they are kept clean. However much they may be

looked after by the occupiers, basement dwellings cannot be considered suitable premises for families to put to all the purposes of a dwelling house. In many cases they are dark and no sun gets on them, and no amount of cleanliness will make them lighter, I suggest that it is most desirable that the Corporation should take into very serious consideration the advisability of obtaining powers to prevent basements being used as dwelling-houses.

HOUSING AND TOWN PLANNING ACT, 1909.

This Act has considerably augmented and codified the duties of Sanitary Authorities. At the end of 1909 Regulations were issued by the Local Government Board, dealing with the inspection of houses. In submitting these Regulations to the Health Committee, I was pleased to be able to report that all the work specified in them had been carried out by the Health Department for many years.

I have considered it advisable to reproduce in this report the following portions of the Regulations :—

ARTICLE II.—(1) The local authority shall as early as practicable after the date of this Order take into consideration the provisions of sub-section (1) of Section 17 of the Act of 1909, and shall determine the procedure to be adopted under these regulations, to give effect to the requirements of that sub-section in regard to the inspection of their district from time to time.

(2) The local authority shall as part of their procedure make provision for a thorough inspection to be carried out from time to time according to the varying needs or circumstances of the dwelling-houses or localities in the district of the local authority.

(3) The local authority shall cause to be prepared from time to time by the Medical Officer of Health, or by an Officer designated by them but acting under his direction and supervision, a list or lists of dwelling-houses the early inspection of which is, in the opinion of the Medical Officer of Health, desirable. The list or lists may, if thought fit, relate to the dwelling-houses within a defined area of the district without specifying each house separately therein.

ARTICLE II.—The inspection under and for the purposes of subsection (1) of Section 17 of the Act of 1909 shall be made by the Medical Officer of Health, or by an Officer designated by the local authority but acting under his direction and supervision, and the Officer making inspection of any dwelling-house shall examine the state of the dwelling-house in relation to the following matters, namely :—

- (1) The arrangements for preventing the contamination of the water supply.
- (2) Closet accommodation.
- (3) Drainage.
- (4) The condition of the dwelling-house in regard to light, the free circulation of air, dampness, and cleanliness.
- (5) The paving, drainage, and sanitary condition of any yard or out-houses belonging to or occupied with the dwelling-house.
- (6) The arrangements for the deposit of refuse and ashes.
- (7) The existence of any room which would in pursuance of subsection (7) of Section 17 of the Act of 1909 be a dwelling-house so dangerous or injurious to health as to be unfit for human habitation.
- (8) Any defects in other matters which may tend to render the dwelling-house dangerous or injurious to the health of an inhabitant.

ARTICLE III.—Records of the inspection of dwelling-houses made under and for the purposes of sub-section (1) of Section 17 of the Act of 1909 shall be prepared under the direction and supervision of the Medical Officer of Health, and shall be kept by the Officer of the local authority making the inspection or by some other Officer appointed or employed for the purpose by the local authority.

The records may be kept in a book or books or on separate sheets or cards, and shall contain information, under appropriate headings, as to :—

1. The situation of the dwelling-house, and its name or number.
2. The name of the Officer who made the inspection.
3. The date when the dwelling-house was inspected.
4. The date of the last previous inspection and a reference to the record thereof.
5. The state of the dwelling-house in regard to each of the matters referred to in Article II. of these regulations.
6. Any action taken by the Medical Officer of Health, or other Officer of the local authority, either independently or on the directions of the local authority.
7. The result of any action so taken.
8. Any further action which should be taken in respect of the dwelling-house.

ARTICLE IV.—The local authority shall, as far as may be necessary, take into consideration at each of their ordinary meetings the records kept in pursuance of Article III. of these Regulations, and shall give all such directions and take all such action within their powers as may be necessary or desirable in regard to any dwelling-house to which the records relate, and a note of any directions so given and the result of any action taken shall be added to the records.

ARTICLE V.—The Medical Officer of Health shall include in his Annual Report information and particulars in tabular form in regard to the number of dwelling-houses inspected under and for the purposes of Section 17 of the Act of 1909, the number of dwelling-houses which on inspection were considered to be in a state so dangerous or injurious to health as to be unfit for human habitation, the number of representations made to the local authority with a view to the making of closing orders, the number of closing orders made, the number of dwelling-houses the defects in which were remedied without the making of closing orders, the number of dwelling-houses which after the making of closing orders were put into a fit state for human habitation, and the general character of the defects found to exist. He shall also include any other information and particulars which he may consider desirable in regard to the work of inspection under the said Section.

ARTICLE VI.—The Medical Officer of Health and any other Officer of the local authority shall observe and execute all lawful orders and directions of the local authority in regard to or incidental to the inspection of the district of the local authority under and for the purposes of Section 17 of the Act of 1909, and the execution of these Regulations.

Mr. Sanderson, the Chief Sanitary Inspector, has prepared the following tabular statement of the work carried out during the year :—

A.

PREMISES INSPECTED FOR STRUCTURAL DEFECTS.	
(A) Premises with a Rental of £27 and over, being used as large company houses or business premises ...	Satisfactory 20
	Unsatisfactory 1
	Defects remedied ... 1
	In such a state as to require testing of Drains (Table B) 1
(B) Premises with a Rental under £27 used as company houses	Satisfactory 17
	Unsatisfactory —
	In such a state as to require testing of drains (Table B) —
(c) Premises with a Rental under £27, occupied by the working classes...	Satisfactory .....418
	Unsatisfactory.....296
	Defects remedied ...213
	In such a state as to require testing of drains (Table B) 83

B.

Premises where new drainage systems have been provided, sanitary fittings modernised, bedrooms ventilated, yard and cellar surfaces re-formed with flags or concrete, and premises left in a thoroughly sanitary condition.	
(A) Premises with Rentals of £27 to £180, being large company houses and business premises.....	94
(B) Premises with Rentals under £27, used as company houses	61
(c) Premises with Rentals under £27, occupied by the working classes	90
TOTAL	245

All the above work was carried out without my having to recommend the Health Committee to issue closing orders. The recommendations to the Committee were embodied in the list of Nuisances submitted each month by the Chief Sanitary Inspector. The large portion of the work was carried out by verbal or informal notice, and even in such instances as statutory notices were authorised by the Committee, the defects were remedied without the serving of the notices in many cases.

It is not necessary for me to reproduce here details of all defects detected and remedied. They will be found on pages 123 to 126.

GENERAL SANITARY WORK.

As far as possible the work of the Department has been classified under separate headings in the previous pages of this section of the report. The table prepared by the Chief Sanitary Inspector at the end of this portion will reveal a large number of visits paid in other respects also, and the supervision of such matters as referred to constitute an important feature in the sanitary work of the town. It is only by thorough and frequent inspections of all the details of the conditions under which we live that the salubrity of our town can be maintained. An aggregate of 2,661 defects were remedied, including defective drains, unsuitable gullies, untrapped wastepipes, defective roof gutters, &c.

Five defective back streets and seven temporary erections in yards have been reported to the Borough Surveyor, and 39 street gullies, 2 sewers, 59 manholes, and 7 dirty back streets have been reported to the Cleansing Superintendent as requiring attention.

897 Preliminary Notices for the abatement of Nuisances have been served. In only 107 of these was it necessary to obtain the authority of the Health Committee to issue subsequent legal notices.

The drains of 314 old houses have been tested, and in only 83 instances were they found completely satisfactory. The remaining 231 required repair or re-laying. 522 tests were applied while the process of repair was going on.

Only two prosecutions were undertaken by the Department during the year, one under the Tents, Vans, and Sheds Bye-laws, and one under the Sale of Food and Drugs Acts (see page 122).

The work of the District Nurse has proceeded during the whole of the year. Her services have been much appreciated by the poor, and she has been able, by rendering skilled assistance, to relieve a great amount of suffering. She paid 3,360 visits during the year. District Nursing has not occupied a prominent part in the many charitable institutions and efforts in the town, in fact, less prominent than it deserves. One district nurse cannot be considered adequate for a town of 60,000 people, and I trust the Health Committee will soon see its way to appoint a second one.

An important effort which is being put forward by a private committee, is towards the formation of a Day Nursery for the children of visitors. The movement was in the first instance brought forward by a member of the Health Committee, and, on the instructions of that Committee, the Deputy Town Clerk and I visited the Southport Day Nursery, and made a report on it. There appears every prospect of a similar institution, though on a larger scale, being in working order in Blackpool during the summer of 1912.

PROSECUTIONS IN 1911.

MONTHS	ACT	DETAILS OF OFFENCE	RESULT
July	Tents, Sheds, and Vans Bye-laws	Failure to provide Water Supply and Sanitary Conveniences.	Fined 5s. and 8s. costs in each case.
August	Sale of Food & Drugs Acts	Water in Milk— Fat 3.12 per cent. Solids, not fat, 7.75 per cent. Added Water, 8 per cent.	Fined 40s. and 37s. costs.

**CHIEF SANITARY INSPECTOR'S SUMMARY OF WORK IN
THE HEALTH DEPARTMENT.**

	1910	1911
Complaints received	336	356
Visits and Inspections (Total)	17,770	22,834
Number of Houses fully inspected	881	929
Number of inspections of work in progress	2,915	2,536
Visits to houses and other premises	3,356	4,231
Re-inspections in relation to nuisances under notice	1,431	2,025
Inspection of Basements	96	244
Inspections of Factories and Workshops	384	592
Inspections of Bakehouses	384	305
Inspections of Common Lodging-houses	973	949
Inspections of Manure Heaps	475	1,111
Sands Inspections	258	257
Visits and Enquiries in relation to Infectious		
Diseases	2,850	2,779
Enquiries into Deaths	769	899
Smoke Observations (half-hour duration each).....	14	26
Visits under Shop Hours Acts	24	194
Visits made under Midwives' Act, 1902	37	103
Visits to Tents, Vans, and Sheds	193	163
Inspections of Back Passages	39	22
Visits to Houses where Births have occurred.....	1,586	1,893
Visits to Houses by District Nurse.....	947	3,360
Visits under Employment of Children Act	18	12
Inspections of Premises re Trade Refuse	15	11
Manholes Inspected	24	91
Visits to Outworkers' Premises	101	102
Notices Served for the Abatement of Nuisances—		
Councils	93	107
Preliminary	618	897
Verbal	176	399
House Drains Tested—Total Number of Tests made.....	1,689	1,632

New Houses Examined—		1910	1911	
		—	—	
Drains	{ Satisfactory	427	436	
	{ Unsatisfactory on first test	40	84	
	{ Rendered satisfactory after first test	14	31	
W.C's	{ Satisfactory	555	507	
	{ Of defective construction	16	13	
Ash Receptacles	{ Satisfactory	315	389	
	{ Unsatisfactory	123	73	
Site of House	{ Satisfactory	441	467	
	{ Unsatisfactory	—	—	
Other Houses	{ (1st Test)	{ Satisfactory	85	83
		{ Unsatisfactory	223	231
House Drains re-tested during re-laying		549	522	
Houses passed off as satisfactory after drainage defects repaired		351	245	
Number of Houses where sanitary defects were found ...		800	1,306	
Number of Houses where sanitary defects were remedied		1,209	1,680	
Number of sanitary defects remedied		2,268	2,661	
Drains.				
Drains laid, re-laid, disconnected, and ventilated ...		258	169	
Drains repaired and cleaned out		631	771	
Unsuitable gully traps replaced by properly trapped gullies and new gullies fixed.....		49	33	
W.C's.				
New w.e.'s fixed in lieu of privies, pail closets, and defective w.e.'s		74	75	
Water closets repaired		102	218	
Water closets unblocked		34	51	
Fittings and water provided for w.c.'s		172	115	
W.C. soil pipes repaired and ventilated.....		65	63	
Earth closets provided		—	—	

	1910	1911
Cesspools and Privies.	—	—
Manure receptacles provided	2	2
Cesspools abolished	—	—
Cesspools provided	1	—
Privies abolished	—	1
Waste Pipes.		
Bath, lavatory, slopstone, and rainwater pipes disconnected over gullies	9	6
Do. do. do. wastepipes trapped	7	13
New slopstone wastepipes fixed	89	167
New rainwater pipes fixed	9	5
Rainwater pipes and roof gutters repaired	47	68
Miscellaneous.		
Houses cleansed and limewashed	18	43
Floors re-laid with flags	29	50
Floors re-laid with concrete	39	45
Back yards repaired.....	107	114
Back yards flagged or concreted	59	73
Back passages cleansed	9	6
Accumulations removed	143	258
Animals removed from improper situations.....	13	7
Roofs repaired	36	39
Rooms ventilated	215	154
Chimneys raised to abate smoke nuisance	1	4
Premises closed	—	—
Yards cleansed	28	19
Watercourse cleansed	16	1
Gable end of house cemented.....	—	—
Overcrowding ceased	6	6
Manholes, &c., sealed (New Houses)		71
Manhole benches raised		8
Air grids fixed to low ventilating shafts		6
Number of brackets provided for trade refuse bags...	3	—
Number of manholes reported to Cleansing Superintendent	35	59
Back streets requiring forming reported	22	5
Erections in yards, &c., reported	10	7

	1910	1911
Letters	2,135	2,589

Infectious Diseases.

Inquiries into cases of Infectious Disease (see visits and inspections	—	—
Houses disinfected after cases of Infectious Diseases	827	1,296
Houses disinfected after a case of Consumption	61	51
Other premises disinfected	73	65
Isolation Notices served upon Householders.....	954	1,627
Isolation Notices served upon School Managers.....	642	968
Isolation Notices served upon School Attendance Officers	—	968
Other Notices to School Managers with regard' to Infectious Diseases	716	945
Other Notices to Householders with regard to Infectious Disease	716	945
Other Notices to School Attendance Officers	716	945
Notices to Free Library with regard to Infectious Diseases	803	1,330

Details of work done in regard to ASH RECEPTACLES during the year 1911 :—

Total Number of Visits Made 1,766

Satisfactory ash receptacles	412
Unsatisfactory ash receptacles	467
Re-inspections of houses under notice	887

	Preliminary	Council
Total Number of Notices Served { (A) To abolish ashpits	4	—
{ (B) To repair modified ashpits ...	24	2
{ (c) To provide galvanised ashbins	460	165
Total Number of modified ashpits repaired		24
Total number of ashpits abolished		4
Total number of galvanised ashbins provided.....		391
Total number of informations laid.....		268

DISINFECTING DEPARTMENT.

Articles Removed from 250 Houses to Sanatorium for Disinfection :—

Sheets, quilts, blankets, &c.	1,473
Articles of clothing	3,384
Pillows and bolsters.....	988
Beds	334
Mattresses	200
Carpets	409
Rugs and mats	161
Curtains	544
Cushions	166
Table cloths	100
Books	169
Miscellaneous articles	1,213
Articles from Sanatorium	2,462
<hr/>	
Total	11,603
<hr/>	

T. SANDERSON, Chief Sanitary Inspector.

BLACKPOOL METEOROLOGICAL
OBSERVATORY.



REPORT

AND

RESULTS OF OBSERVATIONS

FOR THE YEAR 1911.

PART IV.

BLACKPOOL METEOROLOGICAL OBSERVATORY.

The new Blackpool Observatory, erected in 1903, is situated in an open field, close by a bridge crossing the railway behind the New Road Cemetery. The site is about half-a-mile from the Sanatorium site, and is about 70 feet above mean sea level. The Observatory building is of brick, relieved by stone-work, and lighted by windows on the north and south sides. The building is placed four-square to the points of the compass, the doorway looking east. It is twelve feet square, nine feet high, and the floor is about two feet higher than the adjoining ground, requiring three steps at the doorway. The roof is flat and formed of concrete, supported on iron girders, and access to the roof is obtained by a flight of steps in the interior of the building, leading up through a trap door. The roof is protected by a parapet three feet high.

From the centre of the roof projects to a height of 57 feet from the ground a vertical pole of cast-iron tubing, stayed by wire guy-ropes anchored to the ground. This pole carries the "combined" Anemometer and Anemoscope

head and wind vane. The wind vane has a copper mouth-piece and aluminium wings, and measures three feet from end to end. From the head, one-inch tubes pass down alongside the anemometer pole, and through holes in the concrete roof to the Dines' and Baxendell's recording instruments placed on the floor of the Observatory.

On the roof of the Observatory is placed also a wooden stand bearing the Campbell-Stokes Sunshine-recorder. This is placed some 12 feet above the roof, or 25 feet above the ground level. In the Observatory room is placed the Fortin barometer. The Observatory contains also a telephonic installation, so that messages in regard to the weather may be communicated without delay.

The grass enclosure is about 65 feet to the south-east of the Observatory, and 67 feet above mean sea level, and is 24 feet square. It contains in the centre a 5in. rain-gauge, with M.O. pattern rim. To the west of this is fixed one of Halliwell's recording rain-gauges. The Stevenson screen, with its instruments, occupies the centre of the north side of the enclosure, and in the north-west corner is the one foot earth thermometer. In the centre of the south side is fixed the 4 feet earth thermometer, and east of this the two solar radiation thermometers are placed four feet above the ground, one a bright bulb *in vacuo* and the other a black bulb *in vacuo*. Near the south-east corner of the enclosure a minimum recording thermometer with link-bulb is supported close to the grass, and gives the lowest temperature during the 24 hours.

INSTRUMENTS.

The equipment of the Department consists of :—

In or on the new Observatory building—

- (i) A Standard Fortin Barometer.
- (ii) A Campbell-Stokes Sunshine Recorder.
- (iii) A Wind Vane and a Patent Pressure Tube Anemometer.
- (iv) A Baxendell's Recording Anemoscope.
- (v) A Recording Barograph.
- (vi) A Micro-Barograph.

IN THE GRASS ENCLOSURE.

- (vii) A Stevenson Screen, containing wet and dry bulb and maximum and minimum thermometers.
- (viii) An Earth Thermometer at a depth of four feet.
- (ix) An Earth Thermometer at a depth of one foot.
- (x) A Rain Gauge, 5in. M.O. pattern rim.
- (xi) One solar radiation maximum thermometer, bright bulb in vacuo.
- (xii) One Solar Radiation Maximum Thermometer, black bulb in vacuo.
- (xiii) One Terrestrial Radiation (or Minimum on Grass) Thermometer.
- (xiv) One Halliwell's Patent Recording Float Pattern Rain Gauge.

RETURNS AND REPORTS, &c.

The Blackpool Observatory is recognised by the Meteorological Office and the Royal Meteorological Society as a Second Order Station. Observations are taken at 9 a.m., 6 p.m., and 9 p.m. daily, and readings recorded of all the chief instruments. A cipher telegram is sent at 6 p.m. each day to the Meteorological Office, which gives the thermometer and barometer readings, the amount of sunshine, direction of wind, and the kind of weather during the day. This information is communicated to the press, and appears in the London daily papers next morning. In addition, a post-card is despatched every night, giving the 9 p.m. readings, and the records are published on page 4 of the "Daily Weather Report" issued the following morning from the Government Office. The "means" for the week are prepared from these post-cards by the Meteorological Office, and published in the "Weekly Weather Report." A monthly summary is also prepared for the Meteorological Society, but sent direct to the Government Office, whose officials abstract the information required for the "Monthly Weather Report," and afterwards forward the summary to the Royal Meteorological Society. Returns are also sent to the British Rainfall Organisation.

As it is impossible for the observer to get down to the Post Office in time after the 9 p.m. reading, I have arranged for the officials at the Conservative Club, in Victoria Street, to receive the message by telephone, and fill up and post the daily post-card. I have to acknowledge my indebtedness for this privilege.

During 1911, a great deal was done to supply prompt information as to the Blackpool weather to the papers in different parts of the country. Telegrams recording the state of the weather were sent each forenoon throughout the year to the Exchange Telegraph Company, London, " Lancashire Daily Post," " Burton Daily Mail," " Bolton Evening News," " Derby Daily Express," " Huddersfield Examiner," " Halifax Courier," " Liverpool Echo," " Manchester Evening News," and an evening telegram was also sent to the " Liverpool Daily Post and Mercury," " Liverpool Courier," " Manchester Courier," " Yorkshire Daily Observer," " Birmingham Daily Post," " Newcastle Daily Chronicle," and the Weather Bureau, London. During the summer months morning or evening telegrams were sent to 33 daily papers.

There can be no doubt that the increased publicity given to our weather records has been of material advantage to Blackpool.

In July, Mr. Marriott, of the Royal Meteorological Society, inspected the Observatory.

As in previous years the observations have been taken by Mr. Harry Smith, and I have much pleasure in acknowledging the cheerfulness and faithfulness with which he has carried out this responsible work, which has been more exacting than ever since the commencement of the Second Order observations.

Mr. W. Diggle has been trained to act as deputy observer when necessary. The Chief Clerk, Mr. Berry, has also given important help in the preparation of the reports.

The records of observations of temperature, sunshine, rainfall, &c., taken at the new Observatory are complete for the five years—1904-1908—and tables of averages have been compiled for these years. The results for 1911 in the tables appended are compared with these averages.

METEOROLOGICAL REPORT, 1911.

YEAR.—An exceptionally sunny year, bright sunshine surpassing all previous records, and exceeding the averages for the years 1904-1908 by 221 hours, and the years 1881-1905 by 434 hours.

Mean shade temperature was above the average to the end of September, and again in December. Heat of a tropical character was recorded on several days in June, July, and August.

Spells of rainless weather occurred between the 11th January and 9th February, 13th March and 17th April, 4th May and 15th June, 1st and 29th July, and 7th and 25th August; yet the total rainfall was only 0.56 inch below the normal value, due to the heavy falls of rain in September and December. Rain fell on 180 days, as compared with 217 days in the previous year.

Atmospheric pressure was high to the end of August, but low during the remainder of the year. With the exception of the latter part of February and a few days in November and December, there was almost an entire absence of high winds and gales.

Snow falls were rare, occurring only on 4 days, and were of little importance.

The following table will show the months in which the values of sunshine, rainfall, and mean shade temperature, differed from the averages (1904 to 1908).

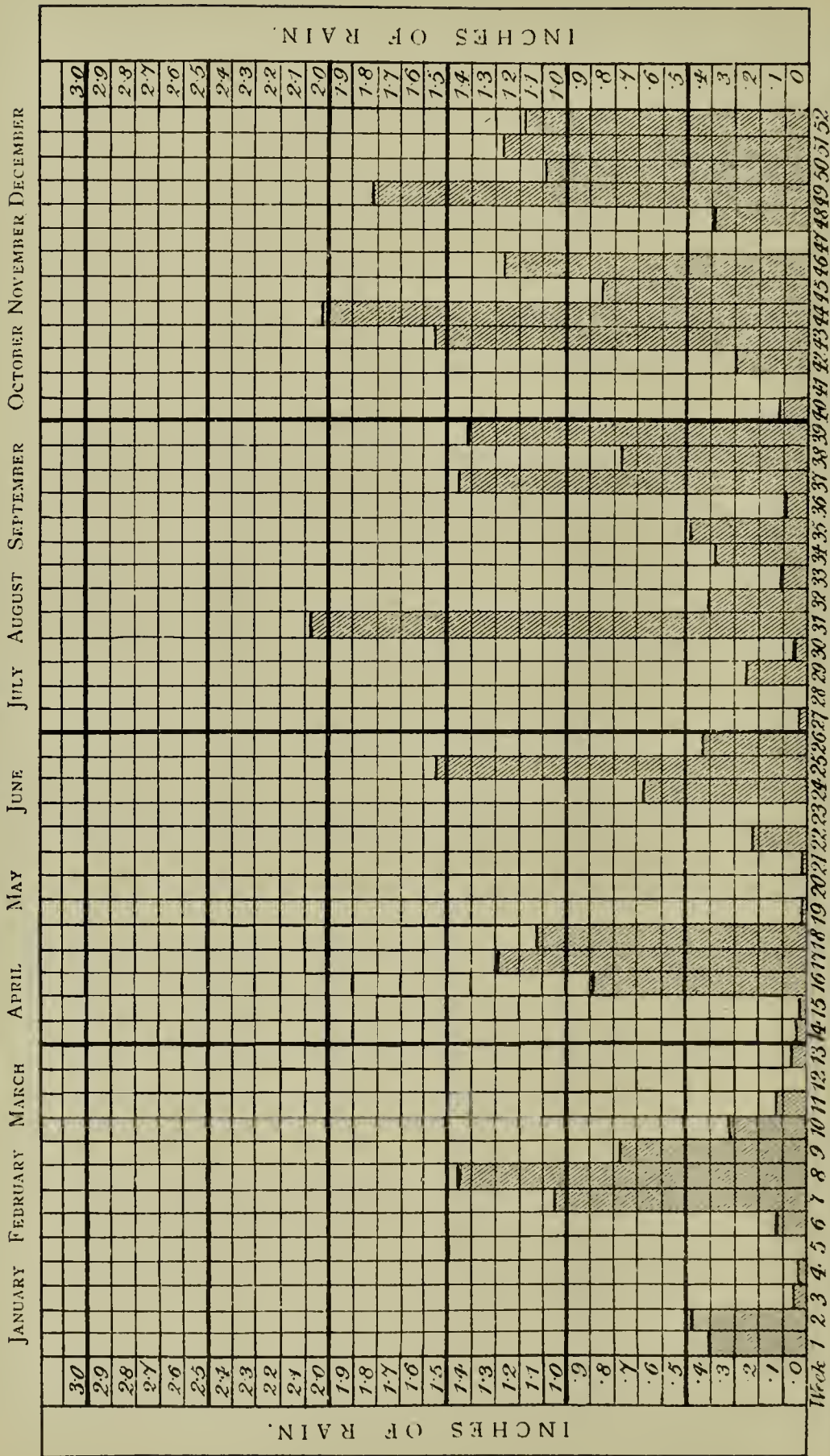
DISTRIBUTION OF BRIGHT SUNSHINE, &c.

MONTHS.					Bright Sunshine.	Rainfall.	Mean Shade Temperature.
January	...	...	...	...	— 1.3	—1.63	+0.4
February	...	...	...	...	— 6.5	+0.79	+1.1
March...	...	...	...	...	+ 6.2	—1.50	+1.1
April ...	...	...	...	...	—36.1	+0.21	+0.4
May ...	...	...	...	...	+75.3	—1.03	+3.9
June ...	...	...	...	...	+20.4	+0.13	+0.9
July ...	...	...	...	...	+62.2	—1.69	+2.5
August	...	...	...	...	+80.6	+0.03	+5.1
September	...	...	...	...	+20.1	+1.29	+0.2
October	...	...	...	...	+ 8.1	—0.47	—1.4
November	...	...	...	...	+ 0.1	+0.14	—0.6
December	...	...	...	...	— 7.3	+3.16	+2.8
Year 1911	...	...	...	...	+221.8	—0.56	+1.4
Year 1910	...	...	...	...	+ 3.7	+1.57	+0.3

+ more than. — less than average.

BRIGHT SUNSHINE.---Bright Sunshine was 221.8 hours above the average for the years 1904-1908, and 434 hours above the Meteorological Office average of 25 years, 1881-1905. The diurnal amount for 1911 and the total amount recorded in a series of years will be found in the accompanying tables.

CHART IV. (Rainfall in Inches--weekly--1911).



Week 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52

DAILY AMOUNT OF BRIGHT SUNSHINE AND RAINFALL, 1911.

Day.	Jan.		Feb.		March.		April.		May.		June.		July.		August.		Sept.		Oct.		Nov.		Dec.		Day
	Sunshine Hrs.	Rainfall In.	Sunshine Hrs.	Rainfall In.	Sunshine Hrs.	Rainfall In.	Sunshine Hrs.	Rainfall In.	Sunshine Hrs.	Rainfall In.	Sunshine Hrs.	Rainfall In.	Sunshine Hrs.	Rainfall In.	Sunshine Hrs.	Rainfall In.	Sunshine Hrs.	Rainfall In.	Sunshine Hrs.	Rainfall In.	Sunshine Hrs.	Rainfall In.	Sunshine Hrs.	Rainfall In.	
1	3.5	—	5.8	—	8.3	.06	3.9	—	5.5	.07	13.5	—	7.1	.03	5.3	.05	11.1	—	9.6	—	3.7	.46	3.3	.19	1
2	6.4	—	—	—	0.1	.02	4.9	—	4.2	.37	14.7	—	13.7	—	8.6	.03	11.1	—	5.5	.04	0.4	—	0.1	.09	2
3	4.9	—	6.9	—	1.1	.12	7.1	—	0.5	.68	12.7	—	8.4	.03	9.2	.05	11.7	.01	7.4	—	—	.19	1.1	.18	3
4	—	—	—	—	3.0	.02	3.6	.03	13.0	—	13.7	—	—	—	11.2	1.02	0.7	.07	0.6	—	0.1	.41	0.9	.12	4
5	2.0	.23	—	—	6.5	.15	9.1	—	7.0	—	13.5	—	10.2	—	2.1	.58	11.1	—	3.0	.03	0.8	.03	—	.04	5
6	1.3	.03	—	—	1.6	.02	10.6	.01	13.1	—	12.4	—	11.6	—	3.0	.41	10.6	—	5.7	.05	0.4	.05	4.5	.22	6
7	—	.05	—	—	4.6	.02	3.8	.02	1.2	—	15.2	—	13.7	—	7.1	—	9.4	—	7.7	—	4.0	.26	5.9	.06	7
8	1.6	.03	1.6	—	—	.25	2.6	—	6.9	—	15.0	—	14.4	—	12.7	—	9.4	—	7.7	.05	2.1	.26	0.1	.78	8
9	3.1	.35	0.2	.13	0.3	.14	6.7	—	10.0	—	5.9	—	12.1	—	13.4	—	4.4	—	4.9	—	1.0	.03	2.5	.42	9
10	1.1	.03	8.4	—	10.3	—	10.4	—	13.7	—	14.9	—	15.8	—	13.7	—	11.0	.32	8.5	—	2.9	—	—	.54	10
11	6.8	—	4.1	—	0.1	.12	4.8	—	11.5	—	12.1	—	11.6	—	13.0	—	2.9	—	8.4	—	0.5	.23	3.5	.01	11
12	3.1	.01	—	.19	7.7	—	6.0	—	8.0	.01	11.4	—	13.7	—	12.4	—	1.12	—	1.1	—	—	.20	2.0	—	12
13	0.2	.01	—	.46	7.0	—	11.1	—	3.7	—	15.5	—	15.1	—	13.3	—	6.3	.01	5.7	—	3.1	.14	—	.04	13
14	—	.01	6.8	.24	2.3	.01	5.6	.05	7.9	—	12.5	—	11.6	—	12.2	—	8.5	—	6.5	—	—	.10	4.3	.23	14
15	3.5	.01	—	.05	6.6	.01	7.8	.05	6.2	—	1.2	.21	3.7	.03	12.6	—	5.1	—	1.6	—	0.1	.29	0.1	.09	15
16	0.1	.01	4.4	—	0.3	.01	3.1	—	5.6	—	2.3	.45	0.1	—	10.7	.12	—	—	7.8	—	1.7	.24	0.1	.09	16
17	—	—	—	.11	3.0	—	0.2	.05	7.3	—	6.5	.15	4.2	.04	7.5	—	4.4	—	1.1	.03	1.0	.10	—	.20	17
18	—	—	4.1	.05	5.4	—	4.6	.10	3.3	—	9.9	—	5.0	.02	8.5	—	1.4	.28	1.7	.05	—	—	—	.41	18
19	—	—	3.0	.22	3.7	—	10.7	.63	11.0	—	5.3	.09	0.3	.15	9.7	.28	3.6	.25	1.3	.03	3.5	—	0.1	.24	19
20	—	.02	.65	.14	5.9	—	1.2	.06	9.1	—	4.6	.01	4.6	.01	0.4	.04	6.9	.03	0.1	.39	1.4	—	—	.05	20
21	—	.01	5.4	.14	3.9	—	0.9	—	13.9	—	1.0	.01	11.3	—	6.4	—	1.2	—	0.1	.39	1.4	—	—	.02	21
22	2.2	.01	2.9	.13	7.3	—	1.0	—	1.0	.02	7.4	—	9.1	—	10.7	.03	8.7	.21	0.4	.08	7.3	—	1.4	.26	22
23	—	.02	8.0	.09	8.7	—	2.2	.15	5.0	—	—	—	10.6	—	3.9	.13	1.5	.05	0.2	.31	0.1	—	1.4	.01	23
24	—	—	3.6	.17	8.4	—	—	.10	14.0	—	0.1	.01	10.2	—	10.0	.16	1.5	.36	3.6	.33	6.5	—	—	.16	24
25	—	—	7.4	.03	9.6	—	—	.18	4.1	—	0.6	.03	9.6	—	3.1	.49	8.3	.48	3.2	.44	5.4	.05	—	.37	25
26	—	—	—	.40	10.1	—	9.2	.11	12.0	—	3.2	—	0.8	—	8.0	—	1.6	.01	8.8	—	—	.01	—	.27	26
27	—	—	2.1	.12	7.6	—	4.1	.35	13.6	—	2.3	.14	13.7	.01	10.2	—	3.0	.31	—	.85	1.5	—	—	.37	27
28	—	—	—	—	3.4	—	—	.40	15.3	—	2.2	.13	12.0	—	—	—	10.0	—	—	.11	1.9	—	—	.25	28
29	—	—	—	—	1.3	—	4.0	—	13.8	.12	4.7	.09	8.4	.30	12.3	—	—	—	2.0	.11	—	.05	—	.11	29
30	2.6	—	—	—	—	.07	—	—	10.1	.11	—	—	7.9	.06	—	—	—	—	3.7	.01	—	—	—	.02	30
31	4.8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	31
Total sunshine hours	47.2	0.98	74.7	3.18	147.3	0.99	141.7	2.29	254.1	1.39	245.1	2.61	288.3	0.68	267.3	3.39	172.4	3.72	117.7	2.94	55.9	3.30	32.1	5.65	
Total rainfall inches																									

BRIGHT SUNSHINE.—Average daily duration 1911, 5.05 hours.

BRIGHT SUNSHINE IN BLACKPOOL DURING 20 YEARS,
1892—1911.

YEAR.	HOURS.	YEAR.	HOURS.	YEAR.	HOURS.	YEAR.	HOURS.
1892	1,384.6	1897	1,485.6	1902	1,522.8	1907	1,518.8
1893	1,497.3	1898	1,386.2	1903	1,474.2	1908	1,615.1
1894	1,310.2	1899	1,481.7	1904	1,539.1	1909	1,654.3
1895	1,470.3	1900	1,406.1	1905	1,757.9	1910	1,625.7
1896	1,367.2	1901	1,687.4	1906	1,679.1	1911	1,843.8

There were 304 days (or 83 per cent.) during the year on which bright sunshine was recorded, and 61 sunless days. The sun shone on every day in May, whilst June, July, and August had each one sunless day.

The brightest months were July, with 288.3 hours, August, with 267.3 hours, and May, with 254.1 hours, and June, with 245.1 hours.

The brightest days of the year were the 10th July, with 15.8 hours, 14th June, with 15.5 hours, and 29th May, with 15.3 hours.

RAINFALL.—Rain to the amount of one-hundredth of an inch or more fell on 180 days, as against 217 days in 1910. The total rainfall amounted to 31.12 inches, or 0.56 inches below the average for the years 1904-1908, and 2.7 inches below the Meteorological Office average for the 35 years 1871-1905.

The months of greatest rainfall were December, with 5.65 inches, September with 3.72 inches, August, with 3.39 inches, November with 3.30 inches, and February with 3.18 inches. The months of least rainfall were July, with 0.68 of an inch, and March, with 0.99 of an inch.

GALES.—Only one Gale occurred during the year. In gusts the highest velocity was 73 miles per hour on the 5th of November. The early part of February, a portion of November and December were the most boisterous periods of the year.

SNOW.—Snow or sleet fell on 4 days, and hail on 9 days.

FOG.—With the exception of one day, the 11th November, we were free from fog throughout the year.

THUNDERSTORMS.—Thunderstorms occurred on 14 days. A heavy thunderstorm of 3 hours' duration occurred on the 11th September (5-30 to 8-30 a.m.)

As regards the winter months, I would draw attention to the comparison figures of three inland stations in Lancashire,

Climatic Conditions in Blackpool during the Winter Months of 1911 as compared
with three Inland Stations in Lancashire :—

Meteorological Station.	JANUARY.			FEBRUARY.			MARCH.		
	Mean Shade Temp.	Hours of Bright Sunshine	Rainfall in inches.	Mean Shade Temp.	Hours of Bright Sunshine	Rainfall in inches.	Mean Shade Temp.	Hours of Bright Sunshine	Rainfall in inches.
Blackpool	39.7	47.2	0.98	39.8	74.7	3.18	42.1	147.3	0.99
Bolton	38.6	27.8	1.35	39.5	38.7	4.55	40.6	97.1	1.86
{ Manchester (Prestwich)	39.1	16.0	1.21	40.4	27.0	3.74	40.9	81.0	1.82
{ Do. (Whitworth Park)	40.4	19.0	1.15	41.2	28.0	2.79	42.1	77.0	1.39
Stonyhurst	39.0	23.0	1.75	39.4	49.0	6.24	40.6	101.0	2.51
Meteorological Station.	OCTOBER.			NOVEMBER.			DECEMBER.		
	Mean Shade Temp.	Hours of Bright Sunshine	Rainfall in inches.	Mean Shade Temp.	Hours of Bright Sunshine	Rainfall in inches.	Mean Shade Temp.	Hours of Bright Sunshine	Rainfall in inches.
Blackpool	48.5	117.7	2.94	43.1	55.9	3.30	42.7	32.1	5.65
Bolton	48.8	75.8	3.21	42.3	46.6	3.91	42.3	22.5	7.55
{ Manchester (Prestwich)	48.8	61.0	3.11	42.7	35.0	3.41	42.9	—	6.24
{ Do. (Whitworth Park)	49.8	59.0	2.36	43.8	33.0	2.80	43.7	27.0	5.00
Stonyhurst	47.9	82.0	3.77	42.3	50.0	4.57	42.7	18.0	7.16

EXTREMES FOR THE YEAR.

BAROMETER.—The highest observed reading of the barometer at Blackpool (reduced to 32° F., and mean sea level), was 30.792 inches on 1st February. The lowest reading was 28.813 inches on the 10th December. The difference between the barometric maximum and minimum was 1.979 inches. The greatest monthly range, 1.852 inches, occurred in February, and the smallest range, 0.613 inch in August.

TEMPERATURE.—The highest temperature recorded in the Stevenson screen by the maximum thermometer was 85.3 degrees on the 13th August ; the lowest recorded by the minimum thermometer in screen was 17.8 degrees, on 1st February.

The highest temperature recorded by the black-bulb solar radiation thermometer was 130.1 degrees, on the 21st July. The lowest temperature recorded by the minimum on grass thermometer was 8.0 degrees, on the 1st February.

SUNSHINE.—The greatest duration of sunshine upon one day was 15.8 hours, on the 10th July.

RAINFALL.—The heaviest daily falls of rain were 1.24 inches on the 24th June, and 1.12 inches on the 12th September.

The greatest intensity of rainfall shown on the automatic record charts occurred on the 30th July, when 0.17 inch fell in 10 minutes, and on the 5th August, when 0.30 of an inch fell in 45 minutes. The longest duration of rainfall recorded was from 5 a.m. on June 24th to 1 a.m. on June 25th, i.e., 20 hours' continuous rainfall.

MAIN FEATURES OF THE MONTHS 1911.

JANUARY.—Mild and dry. Mean shade temperature was 0.4 degree above the average. The coldest day was the 31st, when the temperature fell to 25.6 degrees in the shade. Frost was recorded in shade on 3 days, and ground frost on 14 days. There was a total absence of bright sunshine between the 18th and 22nd, and 24th and 29th. Rainfall was 1.63 inches below the average. Barometric pressure was high and steady. No gales occurred. There was a slight fall of snow on the 6th, followed by heavy fall of rain. The general direction of the wind was West South-west.

FEBRUARY.—Fine to the 12th, but afterwards showery, and rather boisterous. Mean shade temperature was 1.1 degrees above the average. Ground frost was registered on 11 days. Bright sunshine was deficient by 6.5 hours. Rainfall was 0.79 inch in excess of the average. Atmospheric pressure was high during the first part of the month, but low and unsteady during the remainder. The prevailing wind was South-west. Hail fell on the 20th.

MARCH.—Bright and dry, though somewhat cooler than in the corresponding period of last year, owing to the excessive prevalence of easterly winds. Ground frost was recorded on 14 days. Bright sunshine was 6.2 hours in excess of the average. There were only two sunless days. Rainfall was $1\frac{1}{2}$ inches less than the average. No rain fell between the 18th and 30th. Atmospheric pressure was steady throughout the month. No gales were recorded. Hail fell on the 16th, and a very slight fall of snow on the 25th.

APRIL.—Fairly dry, though cool, to the 18th, but afterwards showery. Mean shade temperature was 0.4 degree above the average. Ground frost was registered on 13 days. Bright sunshine was deficient by 36 hours, although there were only two sunless days. Rainfall was 0.21 inch above the average. Atmospheric pressure was high, but unsteady during the latter half of the month. The winds were generally from the North-east and South-west. Snow fell on the 5th.

MAY.—Warm and sunny. The sun shone on every day, recording a total of 254 hours, or 75 hours in excess of the average; this amount, however, does not eclipse the brilliant months of May in the years 1901 and 1909. The brightest day was the 29th, with 15.3 hours. Mean shade temperature was the highest since 1893. Ground frost was registered on 4 days. Rainfall was 1.03 inches below the average. Practically no rain fell between the 4th and 29th. Atmospheric pressure was equal to the average, and steady. The prevailing winds were East and West South-west. Thunder was heard on the 13th, and a slight thunderstorm occurred on the 31st.

JUNE.—Ideal climatic conditions prevailed during the early part of the month, but from the 16th the weather was less settled and showery. Bright sunshine was 20 hours above the average, and there was only one sunless day. Mean shade temperature was 0.9 degree above the average. Ground frost was registered on 2 days. Rainfall was 0.13 of an inch in excess of the average. No rain fell between the 1st and 16th. Atmospheric pressure was below normal, and was unsteady during the middle of the month. The general direction of the wind was North-west.

JULY.—A month of brilliant sunshine and warmth. Mean shade temperature was 2.5 degrees above the average. The highest shade temperature was 84.9 degrees, and this has not been exceeded since September, 1906. Bright sunshine was 62 hours in excess of the average, and in the week ended the 15th, 84 per cent. of the possible duration was recorded. There was only one sunless day. The brightest day was the 10th, with nearly 16 hours bright sunshine. Rainfall was deficient by 1.69 inches. Practically no rain fell between the 1st and 19th, and 21st

and 29th. Atmospheric pressure was high and steady. The winds were chiefly from the West. Thunderstorms of short duration occurred on the 20th, 29th and 30th.

AUGUST.—A sunny month. Bright sunshine amounted to 267 hours, and exceeded all previous records, the nearest approach being 222 hours in 1901. There was only one sunless day. Mean shade temperature was 5 degrees above the average. Rainfall amounted to 3.39 inches, but 82 per cent. of the total fall occurred on 5 days. No rain fell between the 7th and 16th. Atmospheric pressure was slightly above the average. The general direction of the wind was South-west. Thunder was heard on the 1st, and a thunderstorm occurred on the 11th at 9 p.m.

SEPTEMBER.—With the exception of the 10th and 12th, fine weather prevailed to the 19th, but the remaining part of the month was showery and unsettled. Mean shade temperature was equal to the average. Ground frost was recorded on two days. Bright sunshine was 20 hours in excess of the average. Rainfall was 1.29 inches above the average. Atmospheric pressure was high. The general direction of the wind was West. Thunderstorms occurred on the 11th, 21st, and 28th.

OCTOBER.—Fine and dry to the 18th, afterwards unsettled. Mean shade temperature was 1.4 degrees below the average. Ground frost was recorded on 11 days. Bright sunshine was 8 hours above the average. There were only 4 sunless days. Rainfall was deficient by 0.47 inch. Atmospheric pressure was slightly below the average. The prevailing wind was East. Hail fell on the 25th, 30th and 31st.

NOVEMBER.—The early part of the month was unsettled, high winds and rain being of daily occurrence but from the 18th the weather was dry, sunshine being recorded on almost every day. Bright sunshine was equal to average. On the 23rd, 7.3 hours were recorded. Mean shade temperature was a little below the average. Ground frost was registered on 14 days. Rainfall was 0.14 inch above the average. Atmospheric

pressure was low and unsteady. The prevailing winds were South South-west, and South-west. A gale occurred on the 5th, and the steamer "Rosaleen" was wrecked off St. Annes. A fog was experienced on the 11th. Hail fell on the 5th and 8th. Lightning was seen on the 8th.

DECEMBER.—A wet and dull month, rain falling on 29 days, and amounting to 5.65 inches, or 3.16 inches in excess of the average. Mean shade temperature was 2.8 degrees above the average. Ground frost was registered on 3 days. Bright sunshine was 7 hours less than the average. Atmospheric pressure was low, and high winds prevailed during a portion of the month. (On the 11th the "Hebe" was wrecked off St. Annes.) The winds were mainly from the South South-east. Sleet showers occurred on the 8th.

BAROMETRIC PRESSURE* corrected to 32° F.
and mean sea level.

1911.	Mean Pressure.	Difference from Average 5 years 1904-1908.	Highest.	Lowest.	Observed Monthly Range.
January	30.286	+ .219	30'732	29'454	1.278
February	30.086	+ .199	30'792	28'940	1.852
March	29.952	+ .039	30.366	29'519	0.847
April	29.981	+ .065	30'480	29'182	1.298
May	29.979	+ .036	30'282	29'536	0.746
June	29.963	— .040	30'555	29'437	1.118
July	30.140	+ .124	30'598	29'647	0.951
August	29.973	+ .040	30'247	29'616	0.631
September	30.038	— .012	30'365	29'332	1.033
October	29.904	— .017	30'602	28'841	1.761
November	29.654	— .247	30'331	28'858	1.473
December	29.608	— .299	30'361	28'813	1.548
Means	29.964	+ .009	Highest 30'792	Lowest 28'813	1.211

* From observations at 9 a.m. and 9 p.m. daily.

TEMPERATURE—Stevenson Screen Results.

(IN DEGREES FAHRENHEIT).

1911.	Mean Maxi- mum.	Mean Mini- mum	Mean Temp. *	Differ- ence from Average 1904-08.	Mean Daily Range	Absolute extremes.			
						High- est	Date	Lowest	Date
January	43'4	35'9	39'7	+ 0'4	7'5	49'9	28th	25'6	31st
February	44'2	35'5	39'8	+ 1'1	8'7	51'3	22nd	17'8	1st
March	47'1	37'0	42'1	+ 1'1	10'1	57'1	30th	31'6	26th
April	50'6	39.2	44'9	+ 0'4	11'4	57'8	13th	26'3	6th
May	62'7	45.9	54'3	+ 3'9	16'8	77'2	29th	35'1	6th
June	63'7	49'6	56'6	+ 0'9	14'1	80'2	1st	35'1	10th
July	69'8	53'8	61'8	+ 2'5	16.0	84'9	29th	43'2	24th
August	70.7	56'2	63'5	+ 5'1	14'5	85'3	13th	46'2	16th
September	62'3	48'9	55'6	+ 0'2	13'4	73'5	8th	36'4	22nd
October	54'7	42'3	48'5	— 1'4	12'4	61'3	13th	29'4	29th
November	47.7	38'5	43'1	— 0'6	9'2	57'9	5th	25'0	11th
December	46'9	38'5	42'7	+ 2'8	8'4	53'5	18th	31'8	8th
Means	55'3	43'4	49'4	+ 1'4	11'9	Highest 85'3	Aug. 13th	Lowest 17'8	Feb. 1st

* Mean of the daily indications (each for the 24 hours ending 9 p.m.)
of the maximum and minimum thermometers in the screen.

HUMIDITY.

1911.	9 a.m. Readings			Elastic Force of Aqueous Vapour.	Mean relative humidity. 9 a.m.	Differ- ence from Average at 9 a.m. 5 years (1904-1908)
	Dry Bulb	Wet Bulb	Dew point			
January	39.8	38.7	37.2	.226	89.7	-2.0
February	39.9	38.4	36.3	.220	86.9	-3.5
March	43.0	40.4	37.2	.224	80.2	-5.8
April	46.3	43.7	40.7	.259	81.5	+0.3
May	58.0	53.6	49.7	.303	75.2	-7.7
June	60.0	55.2	51.0	.387	73.1	-7.8
July	65.7	59.3	54.3	.426	68.1	-13.4
August	65.2	60.7	57.0	.468	79.1	-3.7
September	58.3	54.7	51.4	.387	78.1	-5.1
October	50.9	48.1	45.1	.306	80.8	-6.8
November... ..	43.8	41.5	38.8	.240	82.9	-7.3
December... ..	43.5	41.9	40.0	.250	87.6	-4.3
Means	51.2	48.0	44.9	.313	80.3	-5.5

HUMIDITY.

1911.	9 p.m. Readings			Elastic Force of Aqueous Vapour.	Mean relative humidity 9 p.m.	Differ- ence from average 5 years 1904-1908
	Dry Bulb	Wet Bulb	Dew Point			
January	39.3	38.3	36.8	.222	90.6	-1.4
February	40.5	39.3	37.7	.230	90.1	-0.4
March	40.5	38.9	36.8	.221	86.9	-4.4
April	43.8	42.0	39.7	.250	85.4	-2.4
May	52.5	50.3	48.1	.340	85.3	-5.1
June	55.2	52.8	50.6	.372	84.9	-4.2
July	60.3	57.6	55.2	.440	83.6	-5.1
August	61.8	59.4	57.4	.474	84.6	-4.6
September	54.6	52.8	51.1	.379	87.7	-2.8
October	47.9	46.4	44.7	.301	80.0	-2.4
November... ..	43.1	41.6	39.7	.250	88.0	-4.4
December	42.5	41.4	40.0	.250	90.8	-0.5
Means	48.5	46.7	44.8	.311	87.2	-3.2

TEMPERATURE EXTREMES, SOLAR AND TERRESTRIAL RADIATION.

1911				Black Bulb in vacuo.		Bright Bulb in vacuo.		Minimum on grass.	
				Highest.	Date.	Highest.	Date.	Lowest.	Date.
January	...	...	...	78.8	2nd	56.8	2nd&16th	13.9	13th
February	...	...	...	99.4	26th	66.4	28th	8.0	1st
March	...	...	...	107.3	27th	79.8	26th	21.1	27th
April	...	...	...	115.8	10th	75.8	22nd	17.8	4th
May	...	...	...	126.9	11th	93.5	29th	24.6	6th.
June	...	...	...	128.1	19th	95.0	1st	25.5	6th& 10th
July	...	...	...	130.1	21st	95.9	31st	32.9	24th
August	...	...	...	129.8	14th	100.4	13th	36.7	23rd
September	...	...	...	119.2	2nd	88.7	8th	26.5	22nd
October	...	...	...	110.1	3rd	77.7	8th	20.9	10th
November...	...	...	...	92.9	1st	67.8	1st	15.6	11th
December	...	...	...	80.3	9th	58.6	17th	27.3	8th
Year	...	...	...	130.1	July 21st	100.4	August 13th	8.0	February 1st

UNDERGROUND TEMPERATURES, AND SOLAR AND TERRESTRIAL RADIATION.

1911		Mean Underground at 9 a.m.		* Difference from Average 5 years (1904-1908)	Mean Daily Max. Temp. in Sun.		Mean excess of Black Bulb in vacuo over Bright Bulb in vacuo.	Mean Daily Minimum on short Grass.
		1 foot.	4 feet.		BlackBulb in vacuo	Bright Bulb in vacuo.		
January	...	40.9	44.5	+1.6	58.9	47.7	11.2	32.0
February	...	40.0	43.2	+1.3	70.0	52.4	17.6	30.6
March	...	42.0	43.8	+1.7	89.3	62.4	26.9	31.5
April	...	44.2	44.3	-0.3	99.3	67.7	31.6	32.9
May	...	51.9	47.9	-0.	112.7	79.8	32.9	38.7
June	...	58.1	53.3	+0.4	116.3	81.8	34.5	44.5
July	...	60.1	55.4	-1.1	121.5	87.8	33.7	49.3
August	...	62.8	58.1	+0.7	118.4	87.5	30.9	51.5
September	...	57.5	57.5	+1.5	104.7	77.1	27.6	43.0
October	...	50.8	53.9	+0.6	87.9	65.9	22.0	35.2
November	...	45.2	50.2	+1.0	72.6	55.6	17.0	33.0
December	...	42.9	46.9	+1.2	61.0	50.8	10.2	35.0
Means	...	49.7	49.9	+0.7	92.7	68.0	24.7	38.1

DURATION OF BRIGHT SUNSHINE AND AMOUNT OF CLOUD.

1911.	Campbell-Stokes Recorder.					Cloud.	
	Total Bright Sunshine. Hours.	Difference from Average 5 years (1904-1908).	Most Sunshine in One Day.		Number of Sunless Days	9 a.m.	9 p.m.
			Amount, Hours.	Date.			
January	47.2	— 1.3	6.8	12th	15	8.1	7.2
February	74.7	— 6.5	8.4	11th	12	7.9	7.6
March	147.3	+ 6.2	10.3	11th	2	6.6	6.8
April	141.7	— 36.1	11.1	14th	2	7.4	6.6
May	254.1	+ 75.3	15.3	20th	—	6.2	5.8
June	245.1	+ 20.4	15.5	14th	1	5.9	6.3
July	288.3	+ 62.2	15.8	10th	1	5.8	5.7
August	267.3	+ 80.6	13.7	10th	1	5.3	6.0
September	172.4	+ 20.1	11.7	3rd	3	6.6	5.8
October	117.7	+ 8.1	9.6	1st	4	7.4	6.6
November	55.9	+ 0.1	7.3	23rd	6	7.9	7.2
December	32.1	— 7.3	5.9	7th	14	8.2	8.3
Totals	1843.8	+ 221.8	15.8	July 10th	61	6.9	6.7

RAINFALL.

1911.	Total Rainfall. *	Difference from Average 5 years (1904-1908).	Number of days with 0.01 in. or more.	Greatest fall in one day. †	
				Amount.	Date.
	Inches.	Inches.		Inches.	
January	0.98	— 1.63	16	.35	10th
February	3.18	+ 0.79	16	.65	21st
March	0.99	— 1.50	12	.25	8th
April	2.29	+ 0.21	15	.63	20th
May	1.39	— 1.03	8	.68	3rd
June	2.61	+ 0.13	12	1.24	24th
July	0.68	— 1.69	10	.30	30th
August	3.39	+ 0.03	13	1.02	4th
September	3.72	+ 1.29	15	1.12	12th
October.....	2.94	— 0.47	15	.85	29th
November	3.30	+ 0.14	19	.46	1st
December	5.65	+ 3.16	29	.78	8th
Totals	31.12	— 0.56	180	1.24	June 24th

* From 9 a.m. on the 1st, including each month the fall during the first nine hours of the succeeding month.

† 24 hours ending 9 a.m. next day.

FORCE AND MOVEMENT OF THE WIND.

AS RECORDED 'BY THE DINES' RECORDING PRESSURE TUBE ANEMOMETER.

1911.	Mean Daily Move- ment.	Absol. Max. for one hour.	Date.	Rate in Max. Gust.	Date.	Gales occurred on these dates.
	Miles.	Miles.		Miles.		
January ...	258	35	12th	50	11th and 12th	—
February ...	297	37	24th	58	26th	—
March ...	324	32	27th	47	2nd	—
April ...	291	32	19th	55	19th	—
May ...	175	23	3rd	42	3rd	—
June ...	250	27	26th	42	26th	—
July ...	194	23	16th	35	16th	—
August ...	209	26	31st	40	31st	—
September	203	30	30th	47	30th	—
October ...	217	35	31st	54	31st	—
November...	328	47	5th	73	5th	Nov. 5th
December ...	309	35	24th	59	24th	—
Means ...	238	47	Nov. 5th	73	Nov. 5th	Total 1

DIRECTION OF WIND AT BLACKPOOL DURING 1911

OBSERVATIONS 3 TIMES DAILY, AT 9.0 A.M., 6.0 P.M., AND 9.0 P.M.

1911.	N.	N.N.E.	N.E.	E.N.E.	E.	E.S.E.	S.E.	S.S.E.	S.	S.S.W.	S.W.	W.S.W.	W.	W.N.W.	N.W.	N.N.W.	Calm.	No. of Observa- tions.
January ...	4	9	4	1	4	9	3	18	1	5	19	23	5	7	4	8	—	124
February ...	2	5	6	2	—	4	7	7	6	9	17	12	12	8	6	7	2	112
March ...	9	6	12	11	29	2	1	—	2	3	9	7	5	8	9	11	—	124
April ...	2	5	21	5	4	—	1	4	4	12	21	13	9	10	7	2	—	120
May ...	4	8	4	7	22	2	4	2	3	4	13	17	8	8	6	10	2	124
June ...	2	2	1	2	20	3	3	1	1	2	19	9	13	8	24	9	1	120
July ...	3	4	2	—	11	3	4	2	8	10	7	9	26	8	20	6	1	124
August ...	3	5	4	2	12	7	5	2	8	4	34	7	8	7	10	2	4	124
September	4	11	5	—	5	—	10	9	4	2	4	11	28	9	9	7	2	120
October ...	7	11	20	3	30	4	5	10	3	3	4	2	9	1	6	6	—	124
November...	9	8	6	6	10	2	12	10	4	12	15	8	9	—	2	7	—	120
December ...	1	1	1	3	1	2	21	30	10	11	14	9	13	7	—	—	—	124
Totals ...	50	75	86	42	148	38	76	95	54	77	176	127	145	81	103	75	12	1,460

APPENDIX TABLES.

WEEKLY INCIDENCE OF INFECTIOUS DISEASE, AND TOTAL AND INFANTILE DEATHS, 1911.

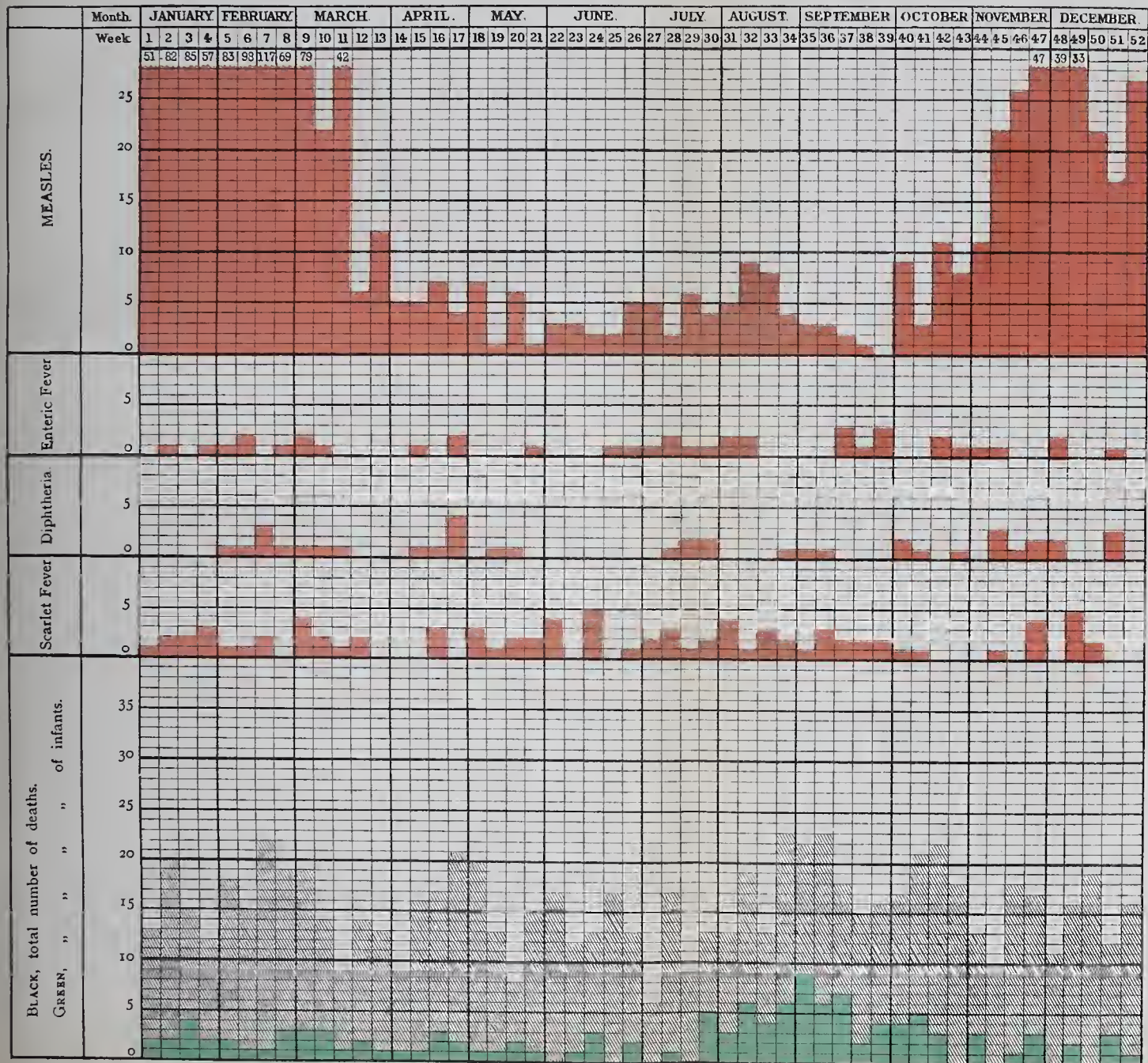


TABLE I. (Local Government Board.)
Vital Statistics of Whole District during 1911 and previous years.

YEAR	Population estimated to Middle of each year	BIRTHS.			TOTAL DEATHS REGISTERED IN THE DISTRICT.		TRANSFERABLE DEATHS.		NETT DEATHS BELONGING TO THE DISTRICT.			
		Un-corrected Number	Nett		Number	Rate	of Non-residents registered in the District	of Residents registered in the District	Under 1 Year of Age		At all ages.	
			Number	Rate					Number	Rate per 1,000 Net Births	Number	Rate
1	2	3	4	5	6	7	8	9	10	11	12	13
1906	57,115	1,013	1,023	17.91	779	13.64	109	33	134	130.99	703	12.31
1907	58,431	1,050	1,057	18.09	752	12.87	111	36	117	110.69	677	11.59
1908	59,741	1,032	1,048	17.54	847	14.18	120	34	134	127.86	761	12.74
1909	61,450	1,009	1,026	16.70	833	13.56	85	31	106	103.31	779	12.68
1910	60,113	988	1,006	16.74	704	11.71	68	50	105	104.37	686	11.41
1911	61,052	953	975	15.97	853	13.97	122	80	123	126.15	811	13.28

TABLE II.—(Local Government Board).

Cases of Infectious Diseases notified during the Year 1911.

NOTIFIABLE DISEASE	NUMBER OF CASES NOTIFIED.							TOTAL CASES NOTIFIED IN EACH LOCALITY (e.g. Parish or Ward) of the District						Total Cases removed to Hospital	
	At all Age	At Ages—Years						1	2	3	4	5	6		
		Under 1	1 to 5	5 to 15	15 to 25	25 to 45	45 to 65								65 and upwds.
Small-pox	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cholera	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Diphtheria (including Membranous croup) ..	40	11	25	2	2	—	—	15	6	—	5	9	5	26	2
Erysipelas.....	26	1	—	1	14	7	—	3	12	—	6	2	3	69	—
Scarlet Fever	84	22	48	9	4	1	—	17	18	1	18	22	8	—	—
Typhus fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Enteric fever	39	—	7	8	18	5	1	1	17	1	3	11	6	34	—
Relapsing fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Continued fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Puerperal fever	5	—	—	1	4	—	—	—	4	—	—	1	—	2	—
Plague	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Under Tuberculosis Regulations, 1908.....	7	—	—	—	5	2	—	—	5	1	1	—	—	1	—
Under Tuberculosis Regulations, 1911.....	9	—	1	2	5	1	—	—	3	1	1	3	1	6	—
Others	28	—	7	1	15	5	—	8	4	—	5	8	3	2	—
Measles	1,181	56	544	561	15	—	—	240	287	14	149	287	204	51	—
TOTALS	1,419	56	578	649	39	72	21	284	356	18	188	343	230	193	—

NOTE.—Mark (H) is the locality in which the Isolation Hospital is situated.

TABLE III. (Local Government Board.)
Causes of, and Ages at Death during the Year 1911.

CAUSE OF DEATH	Nett Deaths at the subjoined Ages of Residents whether occurring within or without the District.									Total Deaths whether of Residents or Non-Residents in Institutions in the District
	All Ages	Under 1 year	1 and under 2 years	2 and under 5 years	5 and under 15 years	15 and under 25 years	25 and under 45 years	45 and under 65 years	65 and upwards	
1	2	3	4	5	6	7	8	9	10	11
All causes { Certified .. { Uncertified ..	780 31	114 9	28 1	21 —	18 —	29 1	111 2	227 10	232 8	58 —
Enteric fever	7	—	—	—	—	—	5	1	1	7
Small-pox	—	—	—	—	—	—	—	—	—	—
Measles	13	5	4	2	2	—	—	—	—	2
Scarlet fever	2	—	—	2	—	—	—	—	—	3
Whooping Cough.....	7	2	4	1	—	—	—	—	—	—
Diphtheria and Croup	6	—	—	4	2	—	—	—	—	3
Influenza	2	—	—	—	—	—	1	—	1	—
Erysipelas.....	3	—	—	—	—	—	—	2	1	—
Cerebro-Spinal fever	—	—	—	—	—	—	—	—	—	—
Meningitis.....	10	1	1	6	—	—	1	1	—	1
Organic Heart Disease	87	—	—	—	2	5	11	35	34	2
Occupational Lead										
Poisoning	1	—	—	—	—	—	—	1	—	—
Phthisis (Pulmonary										
Tuberculosis)	51	—	—	—	4	11	17	15	4	2
Tuberculous Meningitis ..	3	1	1	1	—	—	—	—	—	—
Other Tuberculous Diseases	7	—	2	—	1	1	—	1	2	—
Rheumatic fever	3	—	—	—	—	1	—	2	—	—
Cancer, malignant disease..	72	—	—	—	—	—	10	35	27	9
Bronchitis.....	51	3	6	1	—	—	5	16	20	—
Broncho-Pneumonia	12	4	3	—	2	1	—	2	—	—
Pneumonia (all other forms)	22	1	—	1	—	1	6	9	4	—
Other diseases of Respira-										
tory Organs	6	—	—	—	1	2	1	1	1	—
Diarrhoea and Enteritis	65	45	4	2	—	—	2	6	6	—
Appendicitis & Typhlitis ..	10	—	—	—	1	3	4	1	1	3
Alcoholism	7	—	—	—	—	—	3	4	—	—
Cirrhosis of Liver	9	—	—	—	—	—	—	5	4	—
Nephritis and Bright's										
Disease	42	1	1	—	—	1	11	22	6	2
Puerperal fever	2	—	—	—	—	—	2	—	—	—
Other accidents and diseases										
of Pregnancy and Partu-										
rition	3	—	—	—	—	1	2	—	—	—
Congenital Debility and Mal-										
formation, including										
Premature Birth	35	35	—	—	—	—	—	—	—	1
Violent Deaths, excluding										
Suicide	13	—	—	1	1	—	5	4	2	5
Suicides.....	4	—	—	—	—	—	2	2	—	—
Other Defined diseases....	237	23	2	—	1	3	23	63	122	18
Diseases ill-defined or										
unknown.....	19	2	1	—	1	—	2	9	4	—
TOTAL,	811	123	29	21	18	30	113	237	240	58

TABLE IV. (Local Government Board).

INFANT MORTALITY.

1911. Nett Deaths from stated causes at various Ages under
1 Year of Age.

CAUSE OF DEATH		Under 1 week	1-2 weeks	2-3 weeks	3-4 weeks	Total under 1 month	1-3 months	3-6 months	6-9 months	9-12 months	Total Deaths under 1 year
All causes	Certified	19	4	6	4	33	30	27	14	10	114
	Uncertified	1	—	—	1	2	2	2	2	1	9
Small-pox		—	—	—	—	—	—	—	—	—	—
Chickenpox		—	—	—	—	—	—	—	—	—	—
Measles		—	—	—	—	—	—	1	2	2	5
Scarlet fever		—	—	—	—	—	—	—	—	—	—
Diphtheria and Croup		—	—	—	—	—	—	—	—	—	—
Whooping-cough		—	—	—	—	—	—	1	1	—	2
Diarrhœa		—	1	—	1	2	18	14	6	4	44
Enteritis		—	—	—	—	—	—	1	—	—	1
Tuberculous Meningitis		—	—	—	—	—	—	1	—	—	1
Abdominal Tuberculosis		—	—	—	—	—	—	—	—	—	—
Other Tuberculous Diseases		—	—	—	—	—	—	—	—	—	—
Congenital Malformations		1	—	—	—	1	1	—	—	—	2
Premature Birth		9	2	2	1	14	—	1	—	—	15
Atrophy, Debility and Marasmus		4	—	2	2	8	4	2	4	—	18
Atelectasis		2	—	—	—	2	—	—	—	—	2
Injury at Birth		1	—	—	—	1	—	—	—	—	1
Erysipelas		—	—	—	—	—	—	—	—	—	—
Syphilis		—	—	—	—	—	2	—	—	—	2
Rickets		—	—	—	—	—	—	—	—	—	—
Meningitis (not Tuberculous)		—	—	—	—	—	—	—	—	1	1
Convulsions		1	1	2	—	4	—	4	—	1	9
Gastritis		—	—	—	—	—	2	1	1	—	4
Laryngitis		—	—	—	—	—	—	—	—	—	—
Bronchitis		1	—	—	—	1	2	—	—	—	3
Pneumonia (all forms)		—	—	—	—	—	1	1	1	2	5
Suffocation, overlying		—	—	—	—	—	—	—	—	—	—
Other causes		1	—	—	1	2	2	2	1	1	8
		20	4	6	5	35	32	29	16	11	123

Nett Births in the Year—

Legitimate 896

Illegitimate 79

Nett Deaths in the Year—

Legitimate Infants 103

Illegitimate Infants 17

TABLE V.
VITAL STATISTICS for Wards.

WARD.	Population, 1911.	Birth Rate.				Death Rate.						
		1910	1911	1901 to 1905	1906 to 1910	1910	1911	1901 to 1905	1906 to 1910			
Claremont	13.54	12.36	20.14	14.71	9.58	10.19	11.46	10.80
Talbot	21.12	22.65	25.82	20.56	14.55	17.58	15.14	13.95
Bank Hey	8.84	11.75	12.43	9.53	10.02	7.05	12.74	10.96
Brunswick	12.97	12.83	17.95	14.42	10.15	12.41	11.51	11.89
Foxhall...	18.04	14.49	25.00	19.30	11.12	13.83	13.17	12.07
Waterloo	17.50	18.74	21.01	17.10	11.37	12.13	11.97	11.76

TABLE VI.

Table giving the total number of Births and Deaths with their corresponding rates in each quarter of the year 1911:—

Quarter ending	Births.	Birth Rate.	Deaths.	Death Rate.	Deaths under one year.	Infant Mortality.
1st April	227	14.92	203	13.35	27	118.94
1st July	266	17.49	190	12.49	18	63.91
30th September	255	16.76	207	13.61	53	207.84
30th December	227	14.92	211	13.87	25	110.13
Year	975	15.97	811	13.28	123	126.15

TABLE VII.

Showing the proportion of deaths of children under one, of children under five, and of persons over 65 years of age, to total deaths.

YEAR.	NUMBER OF DEATHS.				PERCENTAGE OF 'TOTAL DEATHS OF DEATHS.		
	Total Deaths.	Under one year of age.	Under 5 years of age.	65 years and over.	Under one year of age.	Under 5 years of age.	65 years and over.
1893	421	123	158	76	29.22	37.53	18.05
1894	361	96	134	68	26.59	37.12	18.84
1895	538	169	232	94	31.41	43.12	17.47
1896	507	137	182	117	27.02	35.90	23.08
1897	614	178	249	115	28.99	40.55	18.73
1898	629	206	260	120	32.75	41.34	19.08
1899	712	228	289	124	32.02	40.59	17.42
1900	720	189	251	144	26.25	34.86	20.00
1901	716	181	251	135	25.28	35.06	18.85
1902	679	148	208	132	21.80	30.63	19.44
1903	683	158	212	159	23.13	31.04	23.28
1904	674	188	251	130	27.89	37.24	19.29
1905	680	144	197	158	21.18	28.97	23.24
1906	703	134	192	171	19.06	27.31	24.32
1907	677	117	162	188	17.28	23.93	27.77
1908	761	134	183	218	17.61	24.05	28.55
1909	779	106	156	223	13.61	20.03	28.63
1910	686	105	150	215	15.31	21.87	31.34
1911	811	123	173	240	15.17	21.33	29.59

TABLE VIII.

Birth, Death and Infant Mortality Rates.

				Estimated Population.	Rate per 1,000.		Total Births.	Total Deaths.	Total Infant Mortality.
					Births.	Deaths.			
1891	...	...	...	25,310	22.3	18.2	566	461	182
1892	...	...	..	26,740	24.0	15.3	642	409	143
1893	...	...	...	28,389	22.4	14.9	638	421	193
1894	...	...	...	30,337	23.9	11.9	726	361	132
1895	...	...	...	32,943	26.7	16.33	882	538	192
1896	...	...	..	36,638	25.7	13.84	940	507	146
1897	...	...	...	40,234	26.25	15.26	1,056	614	169
1898	...	...	...	45,414	27.74	13.85	1,260	629	163
1899	...	...	...	48,200	27.34	14.77	1,318	712	173
1900	...	...	...	50,166	25.27	14.35	1,268	720	149
1901	...	...	...	50,750	22.90	14.11	1,162	716	156
1902	...	...	..	52,174	23.96	13.01	1,250	679	118
1903	...	...	...	53,015	22.97	12.88	1,218	683	130
1904	...	...	...	54,388	21.53	12.40	1,170	674	161
1905	...	...	...	55,712	20.30	12.21	1,131	680	127
1906	...	...	...	57,115	17.91	12.31	1,023	703	131
1907	...	...	...	58,431	18.09	11.59	1,057	677	111
1908	...	...	..	59,741	17.54	12.74	1,048	761	128
1909	...	...	...	61,450	16.70	12.68	1,026	779	103
1910	...	...	...	60,113	16.74	11.41	1,006	686	104
1911	...	...	...	61,052	15.97	13.28	975	811	126

(Tables in this Report refer to resident deaths, &c., only).

COUNTY BOROUGH OF BLACKPOOL.

PUBLIC HEALTH DEPARTMENT.

OUTBREAK OF INFECTIOUS DISEASE.

The following precautions are recommended in order to diminish as far as possible the risk of spread of the disease :—

I.—WHERE THE PATIENT IS TREATED AT HOME :—

The BEDROOM should be as remote as possible from other occupied parts of the house, and should be one with a fire-place. All unnecessary articles of furniture, and all carpets, curtains, and the contents of drawers and wardrobes, should be removed. A sheet should be hung outside the bedroom door and kept constantly wet with a solution of disinfectant.

The ATTENDANT OR NURSE should not undertake any other duties than attendance upon the patient. It is especially dangerous for her to do the cooking for any other members of the household. She should not sleep or take her meals in the sick room. She should keep inside the door of the patient's room a large apron which would cover her from the neck to the feet and also cover the arms to the wrists (a night-dress answers this purpose admirably). She should, whenever entering the bedroom, put on this apron and keep it on while in the room ; then on leaving she should take it off, hang it up on the inside of the door, and wash her hands in a solution of disinfectant, a basin of which should be kept constantly outside the bedroom door. The attendant should have some exercise in the fresh air daily. Motions from the patient should be received in a chamber containing some disinfectant.

Discharges from the patient's nose, ears, or mouth should be wiped with pieces of soft rag, and burned.

The sweepings of the bedroom floor should be burned.

Food not eaten by the patient should be burned, and not given to any of the other children.

Soiled linen must not be sent to a laundry, but should be placed in a solution of disinfectant and then boiled in plain water.

Letters should not be written in a sick room, and all toys, books, etc. should be burned unless they have been efficiently disinfected. No persons from an infected house shall attend day school, Sunday School, or place of public resort. No books shall be borrowed from the Free Library.

After a case of Infectious Disease, no books can be borrowed from the Free Library unless a certificate of disinfection be obtained from the Public Health Office.

SPECIAL PRECAUTIONS IN CASE OF TYPHOID OR ENTERIC FEVER:—

In addition to the above, all urine and fæces from the patient must be placed in the covered iron pail which will be provided by the Corporation and will be changed frequently.

When the patient is considered to be free from infection, a warm bath should be given, with a little disinfectant in it, and clean non-infected clothes put on. The bedroom should then be closed until the Corporation officials disinfect it.

II.—WHERE THE PATIENT IS REMOVED TO HOSPITAL:—

All clothing which has been used by the patient and the attendant should be left in the bedroom from which the patient is removed. The room should be closed and locked until the Corporation disinfectors arrive.

Three night-dresses or night-shirts should be sent with the patient to the Sanatorium.

When the patient is ready to get up, the parent will be notified by the matron, and it is desired that ordinary outdoor clothes and a pair of slippers be then sent to the Sanatorium.

All articles of clothing should be distinctly marked with the patient's name.

All library books must be handed to the Corporation disinfectant.

Children from this house, EXCEPT THOSE MENTIONED BELOW, shall NOT attend school until a letter or notice from the Medical Officer of Health is received, giving the date on which school can be recommenced, and this notice must be given to the head master or head mistress on the first day of return to school.

Names of children (if any) who may remain in attendance at school as per instructions of the Medical Officer of Health:—

.....

Inspector's Initials.....

All disinfection is carried out by the Corporation free of cost. Disinfectant, with instructions as to the use of same, is supplied free of cost to infected houses on application at the Public Health Office.

When requested please produce this form for the inspection of the School
 Attendance Officers.

Extracts from Acts of Parliament dealing with Infectious Diseases.

(1)—Any person who—

- (a) While suffering from any dangerous infectious disorder, wilfully exposes himself without proper precautions against spreading the said disorder in any street, public place, shop, inn, or public conveyance, or enters any public conveyance without previously notifying to the owner, conductor, or driver thereof that he is so suffering; or

- (b) Being in charge of any person so suffering, so exposes such sufferer; or
- (c) Gives, lends, sells, transmits, or exposes, without previous disinfection, any bedding, clothing, rags, or other things which have been exposed to infection from any such disorder,

will be liable to a penalty of FIVE POUNDS, and also to pay the expenses of disinfection of the conveyance.

(2)—No owner or driver of a public conveyance shall be required to convey any person suffering from any dangerous infectious disorder, until he has been paid a sufficient sum to cover the loss or expense of disinfecting his conveyance.

(3) Any person who knowingly lets for hire any house, room, or part of a house in which any person has been suffering from any dangerous infectious disorder without the same and all articles therein liable to retain infection having been disinfected to the satisfaction of a legally qualified medical practitioner, as testified by a certificate signed by him, will be liable to a penalty of TWENTY POUNDS. (An Inn is included in this section.)

(4) And any person in letting, or shewing for the purpose of letting for hire any such house, or part thereof, and knowingly making a false answer to any question as to the existence then, or within six weeks previously, of any dangerous infectious disorder in such house, or part thereof, will be liable to a penalty of TWENTY POUNDS, or to *imprisonment*, with or without hard labour, for ONE MONTH.

(5)—Every person ceasing to occupy a house or part of a house in which any person has within six weeks previously been suffering from any infectious disease who, on being questioned by the owner thereof, or by any person negotiating for the hire of such house or part of a house as to the existence within six weeks previously of any infectious disease, knowingly makes a false answer, shall be liable to a penalty of TEN POUNDS.

(6)—No person without the sanction in writing of the Medical Officer of Health, or of a registered medical practitioner, shall retain unburied elsewhere than in a public mortuary or in a room not used as a dwelling-place, sleeping-place, or workroom, FOR MORE THAN FORTY-EIGHT HOURS, the body of any person who has died of any infectious disease.

(7)—Any person who hires or uses a public conveyance other than a hearse for the conveyance of the body of a person who has died from any infectious disease, without previously notifying the owner or driver that the person whose body is to be conveyed died of infectious disease, and, after any such notification, any owner or driver of a public conveyance other than a hearse which has conveyed the body of a person who has died from infectious disease, who shall not immediately afterwards provide for the disinfection of such conveyance, shall be guilty of an offence.

(8)—Any person who shall knowingly cast into any ashpit, ashtub, or other receptacle for refuse matter, any infectious rubbish without previous disinfection, shall be guilty of an offence.

The Corporation believe that during the prevalence of infectious disease many cases of violation of the law, and consequent danger to public health, arise from ignorance and want of forethought; to prevent neglect from this cause the Corporation thus specially call your attention to the above provisions of the law, ALTHOUGH SUCH NOTICE IS NOT NECESSARY, nor will the absence of it afford any excuse in the event of any offence being committed.

E. W. REES JONES, M.D., D.P.H.,

Medical Officer of Health.

CONFIDENTIAL.

COUNTY BOROUGH OF BLACKPOOL.

PUBLIC HEALTH OFFICE.

.....191

**NOTICE TO THE LIBRARIAN OF THE HOUSES IN WHICH
INFECTIOUS DISEASE EXISTS.**

I beg to inform you that Infectious Disease exists in the house mentioned below. I shall be obliged if you will kindly forward me immediately any book which may be returned by a Borrower inhabiting the house , and suspend the issue of Books to readers residing there until they bring you a Certificate from me that the premises have been disinfected.

Yours faithfully,

Medical Officer of Health.

NAME.	ADDRESS.

PRIVATE FOR REFERENCE ONLY.

COUNTY BOROUGH OF BLACKPOOL.

NOTICE TO SCHOOL MANAGERS.

PUBLIC HEALTH OFFICE,.....19

I beg to inform you that it has come to my knowledge that a case of Infectious Disease exists at the house mentioned below, and to ask you to see that neither the patient nor any person residing in the same house attends School until further notice has been received from this office.

Yours faithfully,

.....
Medical Officer of Health.

NAME OF PATIENT
DISEASE
HOUSE
OCCUPIER

To THE PRINCIPAL

.....SCHOOL.

Private—For Reference only.

COUNTY BOROUGH OF BLACKPOOL.

PUBLIC HEALTH OFFICE,

.....191

NOTICE OF DISINFECTION OF A HOUSE, AND DATE SCHOOL
DUTIES CAN BE RESUMED.

I HEREBY INFORM YOU that the house.....
.....
where the Infectious Disease.....
existed has now been disinfected to my satisfaction, and
.....
from that house may attend School on.....

A similar notice has been sent to the Parents, with
instructions that it must be handed to you on the first day of
return to School, and I shall be very much obliged if you will
examine the date thereon before allowing any child to resume
School-work.

Yours faithfully,

Medical Officer of Health.

To the Principal,

.....School.

This Form to be given to the Head Master or Head Mistress
on the first day of return to School.

COUNTY BOROUGH OF BLACKPOOL.

PUBLIC HEALTH OFFICE,

.....191

NOTICE OF DATE WHEN SCHOOL DUTIES CAN BE RESUMED.

I HEREBY INFORM YOU that your house has been
disinfected to my satisfaction, and.....
.....
may attend School on.....

but on no consideration must a child be sent to School before
that date.

Yours faithfully,

Medical Officer of Health.

To the Occupier,

.....

.....

FORM 3.

Private—For Reference only.

COUNTY BOROUGH OF BLACKPOOL.

PUBLIC HEALTH OFFICE,

.....191

NOTICE OF DISCHARGE FROM THE SANATORIUM, AND DATE
SCHOOL DUTIES CAN BE RESUMED.

I HEREBY INFORM YOU that.....
of
has been discharged from the Sanatorium, and may resume
School duties on.....

A similar notice has been sent to the Parents, with
instructions that it must be handed to you on the first day of
return to School, and I shall be very much obliged if you will
examine the date thereon before allowing this child to resume
School-work.

Yours faithfully,
Medical Officer of Health.

To the Principal,
.....School.

FORM 3A.

This Form to be given to the Headmaster or Headmistress
on the first day of return to School.

COUNTY BOROUGH OF BLACKPOOL.

PUBLIC HEALTH OFFICE,

.....191

NOTICE OF DATE WHEN SCHOOL DUTIES CAN BE RESUMED.

I HEREBY INFORM YOU that.....
.....
recently discharged from the Sanatorium may attend School
on.....

Yours faithfully,

Medical Officer of Health.

To the Occupier,
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